The Journal of the American Medical Association

Published Under the Auspices of the Board of Trustees

VOL. 88, No. 25 CHICAGO, ILLINOIS JUNE 18, 1927

THE DIET IN THE TREATMENT OF CARDIAC FAILURE *

FRED M. SMITH, M.D.; R. B. GIBSON, PH.D.
AND
NELDA G. ROSS, M.S.
IOWA CITY

The importance of the diet in cardiac failure has apparently not been fully appreciated. The Karell diet is usually mentioned in the discussion of the treatment of advanced cardiac failure with edema. While this diet greatly promotes the elimination of excess fluid, it is obviously inadequate because of its low energy value. Various modifications of the Karell diet have been recommended, but in each instance the caloric value has not been sufficient to maintain a normal metabolism.[1]

In advanced cardiac failure, not only the heart but also the entire body is in an exhausted condition. The diet should thus not impose an excess load but still provide sufficient energy. The sodium chloride should be reduced and the liquid intake restricted when edema is present, though not to the degree ordinarily practiced. Milk is a very desirable constituent of the diet because of the ease with which it is assimilated and its low sodium chloride content. Other foods, however, are apparently equally efficient. During the World War, the scarcity of milk in some countries prohibited its use in the diet of cardiac failure and led to the employment of substitutes which, in some instances, were reported to produce more satisfactory results than the Karell diet.[2] The liquid intake was limited to 1,000 cc. and was given in the form of water and fruit juices. To this was added 1 Kg. of potatoes or bananas (the former were cooked without salt). The diet was served in five portions daily. The major portion of the energy was provided by carbohydrates. The favorable results, however, were ascribed to the low sodium chloride and the high potassium content of the potato and banana. The explanation is in accord with the use of potassium and calcium salts in the treatment of edema, especially of nephritic origin.[3]

The importance of carbohydrate as a source of energy to the body and particularly to the heart suggests the use of sucrose and dextrose solutions in the treatment of cardiac failure. Goulston,[4] Carter,[5] Dingle[6] and MacGregor[7] have observed marked improvement in patients with advanced cardiac failure following the addition of sucrose to the diet. They recommend that from 2 to 4 ounces be taken daily. In some instances, the cardiac function was restored after the usual forms of diet and drugs had failed. Büdingen,[8] Pfalz[9] and others have recorded favorable results after the administration of dextrose solution intravenously.

More recently, Edmunds and Cooper[10] have studied the effects of dextrose solution on the circulatory failure produced by the subcutaneous injection of diphtheria toxin. In those animals in which the circulatory collapse was extreme and in which the usual cardiac stimulants had very little effect, the introduction of dextrose solution (10 per cent) into the vein was followed by marked improvement in the heart and an increase in the blood pressure. They regarded the dextrose as a life-saving measure in many instances, and state that they were able to save the animal if the dextrose was injected into the vein before the heart stopped. These results were attributed to the energy provided by the dextrose.

Clinical and experimental observations seem to indicate that milk and carbohydrates, particularly those forms of the latter which are easily assimilated, should constitute the major portion of the diet in cardiac failure. A diet was thus constructed which has an energy value of 2,100 calories and consists of 44 Gm. of protein, 110 Gm. of fat and 222 Gm. of carbohydrate. It is served in the form of milk, cream, butter, eggs, vegetable purées, cooked cereals and fruit juices. The carbohydrate is further increased by the addition of sugars, as dextrin-maltose, dextrose and lactose. Small and frequent feedings are given to avoid gastric retention and fermentation. When edema is present, the liquid intake is limited to 1,500 cc., and the salt is reduced to a minimum. Usually on the third or fourth day other foods, as jelly, crackers (salt free), toast and stick candy, are added. Later, about the eighth day, depending on the condition of the patient, puréed fruits and additional puréed vegetables are incorporated in the diet. Gradually, the consistency of the food is changed from that of the soft to the light diet. In

* Read before the Portland Academy of Medicine, Portland, Ore., Oct. 14, 1926.

* From the Department of Internal Medicine, State University of Iowa College of Medicine.

1. Potter, N. B.: New York M. J. **103**: 450 (March 4) 1916. Taussig, A. E.: Interstate M. J. **21**: 1317 (Dec.) 1914. Goodman, E. H.: The Use of the "Karell Cure" in the Treatment of Cardiac, Renal and Hepatic Dropsies, Arch. Int. Med. **17**: 809 (June) 1916.

2. Von Jagic, W., and Salomon, H.: Wien. klin. Wchnschr. **30**: 559 (May 3) 1917. Salomon, H.: Deutsche med. Wchnschr. **45**: 320 (March 20) 1919. Isenschmid, R.: Schweiz. med. Wchnschr. **50**: 381 (May 13) 1920.

3. Rockwood, Reed; and Barrier, C. W.: Calcium Treatment for Edema, Arch. Int. Med. **32**: 643 (May) 1924. Keith, N. M.; Barrier, C. W., and Whelan, Mary: Treatment of Nephritis and Edema with Calcium, J. A. M. A. **83**: 667 (Aug. 30) 1924. Gibson, R. B., and Larimer, R. N.: Generalized Edema Immediately Following Insulin Control in Diabetes Mellitus, J. A. M. A. **84**: 491 (Feb. 14) 1925.

4. Goulston, A.: Brit. M. J. **1**: 615 (March 18) 1911.

5. Carter, A. H.: Brit. M. J. **2**: 1401 (Nov. 25) 1911.

6. Dingle, H.: Brit. M. J. **1**: 56 (Jan. 13) 1912.

7. MacGregor, G. S.: Brit. M. J. **1**: 158 (Jan. 29) 1921.

8. Büdingen, T.: Deutsches Arch. f. klin. Med. **128**: 151 (Dec.) 1918; Schweiz. med. Wchnschr. **53**: 395 (April 19) 1923.

9. Pfalz, W.: Deutsche med. Wchnschr. **45**: 1181 (Oct. 23) 1919.

10. Edmunds, C. W., and Cooper, R. G.: Action of Cardiac Stimulants in Circulatory Failure Due to Diphtheria, J. A. M. A. **85**: 1798 (Dec. 5) 1925.

some instances, following the elimination of the excess fluids, particularly in those patients who are greatly undernourished, the energy value of the diet is increased to approximate 3,000 calories. However, when the patient is obese, the diet is sufficiently reduced to permit a gradual loss in weight.

The efficiency of the diet was studied in the following manner:

All patients with cardiac failure, with individual exceptions, were treated in the same way. They were put to bed at absolute rest. When necessary, codeine or morphine was administered hypodermically at bedtime to promote sleep. Cascara or other mild laxatives were employed when needed to produce a daily bowel movement. From 15 to 20 minims (0.9 to 1.25 cc.) of tincture of digitalis was prescribed three or four times daily, depending on whether or not the patient had previously taken the drug. The routine hospital soft diet was served. The liquid intake was limited to 1,500 cc., and the urinary output was recorded. The patient was weighed daily when the condition permitted. If after a period of from five to seven days there was no demonstrable change in the general condition and the weight remained stationary, the cardiac diet was prescribed. The favorable influence of the diet is illustrated by the following patients:

REPORT OF CASES

CASE 1.—H. B., aged 61, admitted to the University Hospital, May 18, 1926, because, chiefly, of shortness of breath and swelling of the feet, stated that he had been short of breath for one and one-half years. The clinical picture was that of advanced cardiac failure. The heart was markedly enlarged. There was a basal diastolic and apical systolic murmur. The systolic blood pressure was 160 and the diastolic, 48. There was a general anasarca. The urine showed considerable albumin and occasional hyaline and granular casts. In the electrocardiogram the T deflection was negative in each lead. The weight on admission to the hospital was 165 pounds (75 Kg.). The routine treatment was prescribed. The patient complained of having a diarrhea on the second day. During the following ten days he had from five to eleven watery stools daily, and it was necessary to administer powdered opium to control the diarrhea. After the diarrhea subsided, the weight gradually increased and on the twenty-first day was 171 pounds, or 77.6 Kg. (chart 1, upper curve). The cardiac diet was then prescribed. Thereafter, there was a gradual loss in weight to 144 pounds (65.3 Kg.). The excess fluids had been eliminated, and the symptoms of cardiac failure had disappeared.

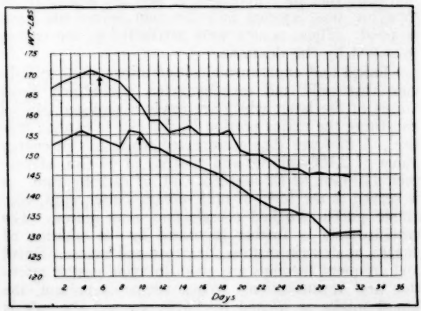


Chart 1.—In this and subsequent charts, arrow indicates day on which the cardiac diet was begun. Upper curve, case 1. The patient was not weighed between the fifth and eighth day because of his general condition. Lower curve, case 2.

Coincident with the reduction in weight there was an increase in the daily urinary output to 1,800 cc.

CASE 2.—F. M., aged 46, admitted to the University Hospital, March 23, 1926, complained, on entrance, of shortness of breath and substernal pain, which radiated to the arms. This was his sixth admission to the hospital. When first seen in July, 1923, he complained of shortness of breath on slight exertion. He was found to have a tertiary syphilis involving the central nervous system and the aorta. The aorta was dilated and the heart increased in size. At the time of the last admission, the patient was very cyanotic and dyspneic. There was a marked pulsation of the carotid arteries and a heaving of the entire precordium. The apex impulse was located in the sixth interspace at the anterior axillary line. The width of substernal dulness in the second interspace was 9 cm. There was a rough systolic and a faint diastolic murmur at the base, and a gallop rhythm at the apex. There were numerous moist râles in the bases of both lungs. The liver extended 6 cm. below the costal margin. The systolic blood pressure was 190 and the diastolic, 120. The urine contained a trace of albumin and occasional hyaline and granular casts. The electrocardiogram showed a marked left ventricular preponderance, and the T deflection was negative in leads I and II. The Wassermann reaction of the blood was strongly positive. The patient weighed 144 pounds (65.3 Kg.). He was treated in the usual manner, except that one-half ounce of magnesium sulphate was given daily before breakfast. During the first ten days the weight decreased to 135 pounds (61 Kg.), and there was some improvement in the general condition. Later, however, the breathing became more difficult, the liver extended to the umbilicus, fluid appeared in the abdominal cavity, and the weight increased to 151 pounds (68.5 Kg.). Theophylline was administered, and a Karell diet ordered. There was some reduction in the weight. The diet was discontinued on the fifth day because of weakness of the patient. The weight gradually increased, and the abdominal cavity became more distended. The patient was very uncomfortable, and it seemed advisable to prescribe morphine during the day in addition to that at night. An abdominal paracentesis was done, and 2,500 cc. of clear straw colored fluid was removed. The fluid, however, rapidly returned. The magnesium sulphate was then discontinued and the cardiac diet ordered. The weight at this time was 155 pounds, or 70 Kg. (chart 1, lower curve). Thereafter there was a gradual loss of weight, the abdomen decreased in size, and the general condition improved. In three weeks, the weight was 137 pounds (62 Kg.), the fluid had practically disappeared from the abdominal cavity, and the liver edge receded to 6 cm. from the costal margin. The weight was further reduced to 131 pounds (59.4 Kg.). The edema had disappeared from the extremities, and there was no demonstrable fluid in the peritoneal cavity.

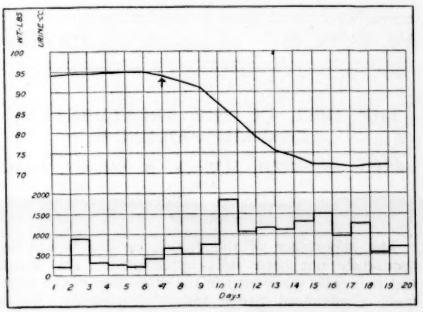


Chart 2.—Case 3.

CASE 3.—E. M., aged 15, admitted to the University Hospital, July 25, 1926, because of shortness of breath, increase in the size of the stomach and swelling of the feet, had had rheumatic fever in December, 1925, involving several joints. Three days

following the onset of the illness, he experienced pain in the precordium and became very short of breath. He was confined to bed for three months. In June the shortness of breath returned, the abdomen increased in size, and swelling of the feet was noticed. The examination indicated that the heart had been extensively injured by the rheumatic infection and that there was very probably an adhesive pericarditis. The abdomen was distended with fluid, and the edema of the legs extended above the knees. The temperature on admission was 101.2 F. and the pulse rate 135 a minute. The weight was 95 pounds (43 Kg.). During the first seven days in the hospital the weight remained stationary and the daily urinary output, except for one day, ranged from 200 to 400 cc. (chart 2). The temperature varied from 98.6 to 100. The pulse averaged approximately 120 a minute. The cardiac diet was ordered on the seventh day. Thereafter the weight rapidly decreased, and on the fourteenth day was 74 pounds (33.6 Kg.). Coincidently, the temperature subsided, the pulse rate diminished, and the urinary output increased.

CASE 4.—H. T., aged 54, when admitted to the University Hospital, Aug. 7, 1926, stated that he had been short of breath for more than two years and had noticed swelling of the feet since April. He was very dyspneic; the apex impulse was in the axilla, and the cardiac tones were distant. The heart rate was 120 a minute and regular except for an occasional premature contraction. The liver extended to the umbilicus, fluid was demonstrated in the peritoneal cavity, and there was extensive edema in the legs. The systolic blood pressure was 186 and the diastolic, 122. The urine contained albumin and a few hyaline and granular casts. The electrocardiogram showed a negative T deflection in leads I and II. The weight on admission was 213 pounds (96.6 Kg.). Six days later it was 213 pounds (chart 3, lower weight curve). The cardiac diet was ordered. During the next week the patient lost 13½ pounds (6 Kg.). The cardiac symptoms disappeared. He was discharged, September 24, weighing 195 pounds (88.5 Kg.). He did not follow instructions after leaving the hospital and returned again, October 27, in much the same condition as when first seen. The weight was 222 pounds (100.7 Kg.). Seven days later it was 220½ pounds, or 99.7 Kg. (chart 3, upper weight curve and urine curve). The

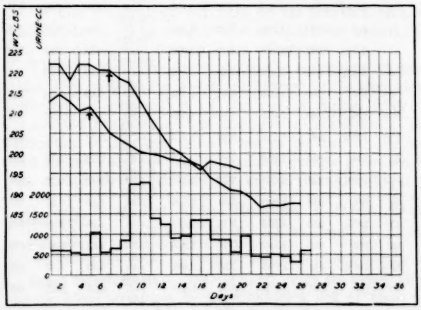


Chart 3.—Case 4: Lower weight curve, first admission to hospital; upper weight curve and urinary output, second admission.

cardiac diet was again prescribed, and there was a reduction in weight similar to that observed during the first period in the hospital.

CASE 5.—S. P., aged 66 (?), was first admitted to the University Hospital, Oct. 1, 1924, with shortness of breath, increase in the size of the abdomen and swelling of the feet. The shortness of breath was first noticed in March, 1924. He was examined and told that he had high blood pressure. When seen following the admission to the hospital, the conditions were those of advanced cardiac failure and extensive edema of the extremities. The heart was very large, the tones at the apex were muffled, and a rough blowing murmur was heard. The aortic second sound was moderately accentuated. An occasional premature contraction was noted. The liver extended 10 cm. below the costal margin. The systolic blood pressure was 110 and the diastolic, 80. The urine showed albumin and hyaline and granular casts. The T deflection of the electrocardiogram was negative in each of the three leads. The patient made a slow recovery and was discharged from the hospital, December 9, in fairly satisfactory condition. He returned home and was able to do light work until May, 1926. The shortness of breath returned and rapidly

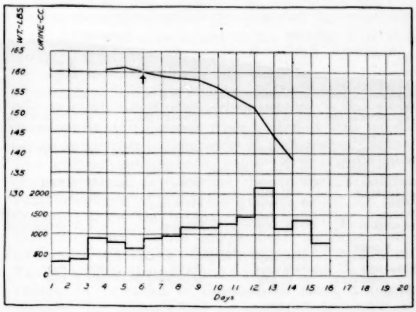


Chart 4.—Case 5.

progressed until he was again admitted to the hospital, July 5, 1926. The patient seemed even more dyspneic than at the former admission, and there was a general anasarca. He was not weighed the first day because of the discomfort that slight exertion produced. The weights on the fourth and fifth days were 160½ and 161 pounds (72.8 and 73 Kg.), respectively (chart 4). The cardiac diet was begun on the sixth day, and during the following seven days the patient lost 21½ pounds (9.8 Kg.). The urinary output increased from 650 to 2,150 cc. The excess fluid was practically eliminated. The following day the patient had a cerebral accident and died three days later.

COMMENT

These five patients were similar in that each had the clinical manifestation of advanced cardiac failure with extensive edema or even general anasarca. The treatment was the same in all instances. The duration of the control period was sufficient to permit digitalis effects before the cardiac diet was prescribed. It is questionable whether any of the patients would have eliminated the excess fluids without the change in diet. The course in two cases, prior to the time of instituting the cardiac diet, was progressively downward, and there was no appreciable improvement in the remaining three. The results observed in the second patient were most striking. It is to be recalled that theophylline, magnesium sulphate and the Karell diet did not alter the clinical course. The magnesium sulphate was discontinued when the cardiac diet was ordered.

These results emphasize the importance of diet in the treatment of cardiac failure. They demonstrate that a change in this feature of the treatment alone may be sufficient to promote the elimination of the excess fluid after the usual remedies have failed. The effectiveness of the diet is believed to be due to the energy value and the form in which the food is given. It is felt that patients with cardiac failure, especially those in whom the condition has existed for some time, should have at least a diet that will maintain a normal metabolism. This requirement has not been met, particularly when the Karell diet and its various modified

forms have been employed. It is possible that insufficient nourishment may be responsible for the poor response to digitalis in some instances. The observations of Edmunds and Cooper[10] support this conception. It is to be recalled that digitalis and other cardiac stimulants had very little effect in the advanced circulatory collapse produced by the subcutaneous administration of diphtheria toxin, whereas following the introduction of glucose into the vein the action of the drugs was far more favorable. This possibility was further suggested by a patient recently under observation. He had the clinical manifestation of advanced cardiac failure with extensive edema of the extremities when admitted to the hospital. The auricles were fibrillating, and the cardiac rate varied from 130 to 140 a minute. He ate very little because of nausea and the distaste for food during the first five days in the hospital. He was given more digitalis than is ordinarily employed, yet there was no change in the cardiac rate and the course of the condition was progressively downward. At this time the administration of glucose (10 per cent solution) by rectal drip was begun. The following morning the patient voluntarily stated that he felt considerably better and expressed a desire for food. The cardiac rate rapidly decreased and the urinary output increased. The glucose solution was discontinued after another twenty-four hours, and recovery thereafter was uneventful.

The form in which the food is given is probably as important as the energy value of the diet. It is obvious that the food should not only have a low salt content, particularly when edema is present, but also be provided in a form that may be assimilated without imposing an excess load on the gastro-intestinal tract and the heart. While the favorable results of the cardiac diet are no doubt in part due to the low salt content, the energy supplied by the carbohydrates in the form of sugars is believed to be an important factor.

During the last year, the cardiac diet described has been employed in more than fifty patients. In only two was there excessive gas formation, and one had diarrhea. In each instance the conditions were controlled by temporary reduction of the carbohydrates. Later, the carbohydrates were increased without provoking a diarrhea or producing excess gas. The fruit and vegetable content of the diet is sufficient to produce usually one or two bowel movements daily. Rarely was it necessary to administer laxatives. It has frequently been necessary to vary the diet because of the taste or condition of the individual. In one patient with hyperthyroidism and a basal metabolic rate of plus 48 per cent, the protein was increased to 65 Gm. and the energy value to 5,500 calories. Two patients had a dislike for milk. In each, the milk was reduced and the protein replaced with an additional egg. Later, one of these patients overcame the distaste for milk and took any amount given him. An occasional patient objects to sweetened beverages; either jelly or stick candy was substituted for the sugars for a few days. Later, the patient was often willing to take additional sugar in the other foods.

In some of our patients, the twenty-four hour urinary excretion of nitrogen, chlorine and creatinine was determined. In one case (table 2) the figures for sodium, potassium and phosphorus are also included. The values for nitrogen and chlorine are, in general, in accord with the earlier workers. There was no evidence of a toxic nitrogen catabolism except in one patient. The chlorine excretion was increased with the elimination of the edema. The patients were undoubt-

TABLE 1.—*Cardiac Diet, Weighed and Approximated* *

MEALS			LUNCHES		
Breakfast	Gm.		9 a. m.	Gm.	
Milk	100	½ cup	Water	100	½ cup
Cream	66	¼ cup	or crushed ice	100	1 cup
Cereal (cooked)	120	½ cup			
Sucrose	10	3 teaspoonfuls	10 a. m.		
Glucose	10	6 teaspoonfuls	Orange juice	150	¾ cup
Dextrin-maltose	10	0	Lemon juice	5	1 teaspoonful
			Sucrose	10	3 teaspoonfuls
Dinner					
Soup Cream	132	½ cup	Glucose	20	6 teaspoonfuls
Soup Potato	50	¼ cup			
Butter	10	2 teaspoonfuls	3 p. m.		
Ice cream	100	½ cup	Milk	100	½ cup
or junket †		½ cup	Cream	66	¼ cup
Milk	100	½ cup	Flavoring		
Water	100	½ cup	Dextrin-maltose	12	4 teaspoonfuls
or crushed ice	100	1 cup	Sucrose	5	1 teaspoonful
Supper					
Soup Cream	66	¼ cup	4 p. m.		
Soup Milk	100	½ cup	Water	100	½ cup
Soup Spinach ‡	50	¼ cup	or crushed ice	100	1 cup
Butter	10	2 teaspoonfuls			
			7 p. m.		
Custard Egg	50	1 egg	Milk	150	¾ cup
Custard Milk	100	½ cup	Dextrin-maltose	10	3 teaspoonfuls
Custard Lactose	10	3 teaspoonfuls	or candy		1 stick
Custard Glucose	10	3 teaspoonfuls			

* The composition of the weighed diet (calculated) is protein, 44 Gm.; carbohydrate, 220.6 Gm.; fat, 109 Gm., and calories, 2,076. Additions to the diet are made between the fourth and the tenth day, beginning with toast, jelly, salt-free crackers, and butter; sieved fruit and baked potato are included later. If the diet is first increased on the fourth day, the patient may be receiving as final additions to the basic diet protein, 3.7 Gm.; carbohydrate, 112.3 Gm.; fat, 25 Gm., and calories, 718, as follows: breakfast, toast, 20 Gm.; butter, 10 Gm.; jelly, 20 Gm.; dinner, baked potato, 1; sieved fruit juice, 100 Gm.; toast, 20 Gm.; butter, 10 Gm.; supper, sieved fruit, 100 Gm.; toast, 20 Gm.; butter, 10 Gm. Stick candy may be substituted anywhere in the diet for the equivalent amount of sugar.

† Milk, 100; cream, 66; sucrose, 5; dextrin-maltose, 10, and a half junket tablet. When junket is served, the milk at 7 p.. m. is reduced to 100.

‡ Puréed spinach. Other vegetables may be substituted.

TABLE 2.—*Total Nitrogen and Mineral Metabolism in Case 4*

Date	Weight, Pounds	Volume, Cc.	Specific Gravity	Total Nitrogen, Gm.	Creatinine, Mg.	Chlorine (Sodium Chloride) Gm.	Sodium, Gm.	Potassium, Gm.	Phosphorus, Mg.
10-29	218	540	1.036	6.54	692	3.62 (5.94)	2.61	2.79	332
30	222	520	1.032	5.93	723	3.61 (5.93)	0.90	2.31	416
31	222	1,060	1.028	10.54	1,272	7.69 (12.61)	5.07	4.37	604
11- 1	220½	580	1.025	5.68	597	4.56 (7.48)	2.82	2.32	414
2*	220¾	640	1.028	6.45	598	5.05 (8.32)	2.29	3.07	480
3	218½	890	1.025	8.60	1,139	6.69 (10.97)	3.51	3.83	597
4	217½	2,230	1.010	10.46	1,235	7.41 (12.15)	2.98	3.38	687
5	213½	2,250	1.014	10.71	1,218	8.50 (13.95)	5.91	4.64	724
6	209	1,400	1.016	7.45	1,156	6.21 (10.22)	2.66	3.68	708
7	205½	1,230	1.016	8.35	1,171	6.15 (10.09)	3.14	2.67	684
8	204¾	900	1.022	7.59	1,035	5.76 (9.45)	3.56	2.56	578
9	200	980	1.018	7.07	1,105	5.12 (8.43)	3.44	3.33	560
10†	198	1,340	1.015	8.63	1,135	5.06 (8.31)	2.65	3.35	653
11	196¾	1,340	1.015	8.68	1,433	6.74 (11.06)	3.57	2.81	610
12	194	840	1.020	7.17	1,201	4.85 (7.98)	3.14	1.17	332
13	192¾	830	1.020	7.55	1,351	4.29 (7.06)	2.49	1.61	376
14	191	540	1.025	6.61	1,295	3.25 (5.35)	1.16	2.00	297
15	190½	920	1.022	8.11	1,221	4.13 (6.80)	1.96	2.36	408
16	189	485	1.030	7.45	1,358	2.20 (3.64)	1.21	3.81	403
17	188½	440	1.030	7.73	1,338	1.42 (2.23)	0.80	3.52	415
18	187	495	1.028	8.59	1,208	1.68 (2.76)	0.52	2.93	495

* First day of cardiac diet.
† Diet was increased on this and subsequent days.

edly in nitrogen equilibrium or a plus balance was indicated, even when the body weight remained stationary. The creatinine excretion increased with the onset of the diuresis and remained fairly constant thereafter. The results of this determination prior to the onset of the diuresis suggests the advisability of a further study of the creatinine during the development of the edema.

The significance of the sodium ion in edema formation has received clinical recognition only in recent years. Most of the data have been interpreted on the basis of chlorine determinations calculated as sodium chloride. Keith and Whelan [11] have found that sodium and chlorine ions are usually excreted in molecular proportions in the diuresis produced by merbaphen in normal persons and in noncardiac edema cases.

It is to be noted that there was an increase in the excretion of potassium and phosphorus along with sodium chloride during the diuresis. Gamble, Blackfan and Hamilton [12] regard the excess excretion of the sodium and potassium as indicating the source of the fluids eliminated. They believe that the sodium comes from the extracellular fluid and is the first to be moved, while the potassium is of intracellular origin.

The blood uric acid was usually increased in the arteriosclerotic patient, while the creatinine and urea nitrogen were within normal limits. As the clinical condition improved, the uric acid decreased.

SUMMARY

The importance of diet in the treatment of cardiac failure has not been fully appreciated.

The Karell diet, which is usually mentioned in the treatment of advanced cardiac failure, does not provide sufficient energy. The diet here described has been valuable in the treatment of advanced cardiac failure, particularly when extensive edema is present. This diet has an energy value of 2,100 calories, and consists of 44 Gm. of protein, 110 Gm. of fat and 222 Gm. of carbohydrate. The fluid intake is limited to only 1,500 cc., and the salt is reduced to a minimum.

This diet has been employed in the treatment of more than fifty patients, in whom the change in the diet alone effected an elimination of the excess fluids, with an associated improvement in the general condition. The efficiency of the diet is believed to be due to the low salt content, and the easily available energy provided by the carbohydrate, particularly in the forms of sugar.

11. Keith, N. M., and Whelan, Mary: Am. J. Physiol. **72**: 195 (March) 1925.
12. Gamble, J. L.; Blackfan, K. D., and Hamilton, B.: J. Clin. Investigation **1**: 531 (April) 1925.

Renal Tuberculosis.—Tubercle bacilli reach the kidney either by the blood stream or by the lymphatics, and of these two routes the hematogenous is undoubtedly the commoner. The exact site of the initial lesion in the kidney is disputed. The peculiar arrangement of the intrarenal arteries favors a cortical lesion, but clinically, though many tubercles are seen in the cortex, the grossest lesion is nearly always at the base of a papilla. The lymphatics are considered by some to be the means of infection in those cases which are secondary to quiescent pleural and pulmonary tuberculosis. The bacilli are thought to be carried in the lymphatics passing through the diaphragm by a retrograde current set up by pleural adhesions. Though primary lymphatic infection is doubtful, secondary infection may be conveyed from a diseased to a healthy kidney by the communicating channels between the two renal plexuses, or from an ulcerated bladder by the periureteral lymphatics.—Nitch, C. A. R.: Urogenital Tuberculosis, *Brit. M. J.*, May 14, 1927.

ANTISCORBUTIC VITAMIN CONTENT OF MILK OF STALL-FED COWS THROUGHOUT A YEAR

PROBABILITY THAT ENSILAGE IS AN IMPORTANT SOURCE OF THIS VITAMIN *

FLORENCE L. MacLEOD, PH.D.
NEW YORK

Milk from cows which are stall-fed the year round is being used to some extent at the present time in the feeding of infants. In view of the fact that the milk from pasture-fed animals has been reported by most investigators to be richer in its vitamin content than that from animals without access to pasture, it has seemed of interest to test the milk from a herd of stall-fed cows for an entire year to determine its antiscorbutic potency. The greater antiscorbutic value of the milk of the pasture-fed cow is doubtless due to the antiscorbutic vitamin content of the fresh grasses which the animal receives, since the animal body probably does not synthesize this vitamin and is therefore dependent on its food to provide an adequate amount of it in its milk. Ensilage being the principal source of the antiscorbutic vitamin in the ration of the stall-fed cows, it appeared possible that animals fed an ensilage of good quality might produce a milk of high antiscorbutic value. It was also of interest to determine whether the antiscorbutic value of such milk would fluctuate from season to season or would remain reasonably constant.

Before the results of the present investigation are given, previous experiments dealing with the study of the antiscorbutic value of milk will be reviewed briefly.

REVIEW OF THE LITERATURE

Frölich,[1] in 1912, was the first to show by laboratory experiments that milk contained the antiscorbutic vitamin, vitamin C. He reported that guinea-pigs which were fed oats and raw milk ad libitum were normal after from 116 to 138 days on the diet.

Chick, Hume and Skelton,[2] in 1918, carried out the first work of a quantitative nature on the vitamin C content of milk. They found that guinea-pigs receiving from 30 to 50 cc. of raw cow's milk per animal daily died from scurvy in thirty days. If the amount of milk consumed averaged 50 cc., the lives of the guinea-pigs were prolonged to seventy-five days. When the amount of milk consumed averaged 85 cc. at the beginning and increased up to 130 cc. for the main period, good health was maintained and the weights of the animals were normal throughout the three months of the experiments.

Cohen and Mendel [3] reported, in 1918, that small amounts of raw milk did not prevent the onset of scurvy in guinea-pigs, while larger amounts caused the scorbutic symptoms to disappear.

Barnes and Hume,[4] in 1919, stated that from 100 to 150 cc. of raw milk per animal daily prevented scurvy in guinea-pigs weighing from 300 to 400 Gm. They also found some evidence which indicated that summer milk has a higher antiscorbutic value than winter milk.

Hart, Steenbock and Ellis,[5] in 1920, gave experimental proof of the relationship of the food of the cow

* From the Department of Chemistry, Columbia University.
* This research was aided through a grant by the Walker-Gordon Laboratory Company.
1. Frölich, T.: Ztschr. f. Hyg. u. Infectionskrankh. **72**: 155, 1912.
2. Chick, Harriet; Hume, E. M., and Skelton, R. F.: Biochem. J. **12**: 131, 1918.
3. Cohen, B., and Mendel, L. B.: J. Biol. Chem. **35**: 425 (Sept.) 1918.
4. Barnes, R. E., and Hume, E. M.: Biochem. J. **13**: 306, 1919.
5. Hart, E. B.: Steenbock, H., and Ellis, N. R.: J. Biol. Chem. **42**: 383 (July) 1920.

to the vitamin potency of the milk. They found that one guinea-pig out of three was protected from scurvy on 15 cc. of summer milk daily, and that two out of three on 30 cc. were protected, while on 50 cc. complete protection was obtained in every case. They also examined the milk from cows which had been kept on air-dried roughages and grains with no source of fresh, green vegetable tissue for several years. Seventy-five cc. of this milk daily protected guinea-pigs for eighteen weeks.

In 1919, Hess and Unger [6] stated that 80 cc. of milk was required to protect a guinea-pig from scurvy, and that at least one pint of fresh, raw milk daily was necessary to protect a baby from scurvy. Hess, Unger and Supplee,[7] in 1920, reported the results of experiments on the relation of fodder to the antiscorbutic vitamin content of milk. Five cows were kept on winter feed all winter, and in April were given a ration very low in its vitamin C content. After three weeks on this ration, one day's mixed sample of milk was dried by the roller process. The cows were then placed on pasture for three weeks and one day's mixed sample of the milk was dried. Five guinea-pigs receiving 80 cc. of the dry fodder milk per animal daily, all developed scurvy within twenty-one days and died of scurvy within fifty-six days. Three which were given 80 cc. of the pasture milk were alive after 120 days, and two of these showed mild scurvy.

Dutcher and his associates,[8] in 1920, reported experiments on the influence of the diet of the cow on the antiscorbutic properties of cow's milk. Two cows were placed on a vitamin-poor ration in the middle of January. The mixed milk was fed in varying quantities to several groups of guinea-pigs. June 1, the cows were given a vitamin-rich ration, and the experiment was repeated. Twenty cubic centimeters of summer milk per animal daily was found to be superior in antiscorbutic value to 60 cc. of winter milk. These authors secured evidence which showed a tendency for the milk to become poor slowly when the diet fed was low in vitamins, while the milk became of higher value almost immediately on ingestion of a vitamin-rich ration.

Cavanaugh, Dutcher and Hall,[9] in 1923, in studying the effect of the spray process of drying on the vitamin C content of milk, fed raw milk at levels of 20, 30 and 40 cc. per animal daily to guinea-pigs. The animals were fed for three months, and out of ten animals receiving 40 cc. of milk, four had mild scurvy.

Olson and Copeland,[10] in 1924, reported the results of studies on the influence of the diet of the cow on the antiscorbutic potency of the milk. They concluded that the vitamin C in milk has its origin in the feed of the cow, and that to maintain an adequate supply of this vitamin in the milk, good silage is important.

Hughes, Fitch, Cave and Riddell [11] reported recently, as the result of a long series of experiments, "that the vitamin C content of a cow's ration has little if any influence on the vitamin C content of the milk."

EXPERIMENTAL OBSERVATIONS

As stated before, experiments were performed to determine the antiscorbutic vitamin content of raw milk received from one dairy during an entire year from July, 1925, to July, 1926. The cows from which the milk was obtained received a diet which was believed to be an optimum one, and which was uniform throughout the entire year. Each cow during the year received on an average 9 pounds of the following mixture daily: bran, 400 pounds; hominy, 700 pounds; oilmeal, 300 pounds; gluten, 200 pounds; bone meal, 20 pounds; lime flour, 20 pounds, and salt, 40 pounds. In addition, each animal was given daily 5 pounds of New Jersey alfalfa hay, 4 pounds of ground Colorado alfalfa hay, 30 pounds of corn silage and 4 pounds of soaked dried beet pulp. The animals were outdoors in yards for a few hours in the middle of the day, weather conditions being suitable, but at no time had access to pasture.

The experimental procedure of Sherman, LaMer and Campbell [12] was followed in this work. According to their method, guinea-pigs which are known to be growing normally and which weigh from 300 to 350 Gm. are fed ad libitum a basal diet adequate in all other respects but devoid of vitamin C; and, in addition, the food to be tested in known amounts daily. The animals are continued on the experimental diet for ninety days, and the degree of scurvy determined at autopsy.

The basal diet used was approximately that of Sherman, LaMer and Campbell.[12] Its composition was: rolled oats, 39 per cent; bran, 20 per cent; skimmed milk powder heated, and freely exposed to air for four hours, at 110 C., 30 per cent; butter fat, 10 per cent, and sodium chloride, 1 per cent.

The amount of milk powder and butter fat used in this basal diet was reduced in proportion to the liquid milk fed. The diets were made up in such a way that each animal would receive daily approximately the same amount of milk solids from the sum of the liquid milk fed, and the milk powder contained in the basal diet. In calculating the diets, the average intake of dry food was considered as 20 Gm. per animal daily, although it was found that the appetites of the individual animals for the basal diet were very different.

The milk was fed six days a week and was given by medicine dropper, two or three feedings being made during the day. The amounts given were calculated on the basis of a 300 Gm. initial weight. Every animal was weighed three times a week during the entire experiment. The scurvy scoring suggested by Sherman, LaMer and Campbell [12] and by Kenny [13] was used. Each animal on autopsy was given a numerical score which was based on deviations from the normal in the bony system; i. e., in the jaw, teeth, ribs and joints, and on hemorrhages occurring in the ribs, intestines, joints and muscles. According to the degree of scurvy, one plus sign, two plus signs or three plus signs were assigned to each part of the body examined for scurvy. By this method of totaling the plus signs, the maximum score possible is 24. When only a trace of scurvy was observable in any part of the body, a score of 0.5 was assigned.

During the year, three lots of skimmed milk powder were used in the basal diet. Each lot was tested to make sure that it was free from antiscorbutic vitamin. The control animals, which received the basal diet with no source of antiscorbutic vitamin, died of severe scurvy after an average of 22.4 days on the diet, with an average scurvy score of 18. The results found for these animals are given in table 1, and it can be seen that a seasonal difference was not found in their records.

6. Hess, A. F., and Unger, L. J.: Factors Affecting the Antiscorbutic Value of Foods, Am. J. Dis. Child. **17**: 221 (April) 1919.
7. Hess, A. F.; Unger, L. J., and Supplee, A. C.: J. Biol. Chem. **45**: 229 (Dec.) 1920.
8. Dutcher, R. A.; Eckles, C. H.; Dahle, C. D.; Mead, S. W., and Schaefer, O. G.: J. Biol. Chem. **45**: 119 (Dec.) 1920.
9. Cavanaugh, G. W.; Dutcher, R. A., and Hall, J. S.: J. Indust. & Engin. Chem. **16**: 1070, 1924.
10. Olson, T. M., and Copeland, L.: J. Dairy Sc. **7**: 370, 1924.
11. Hughes, J. S.; Fitch, J. B.; Cave, H. W., and Riddell, W. H.: J. Biol. Chem. **71**: 309 (Jan.) 1927.
12. Sherman, H. C.; LaMer, V. K., and Campbell, H. L.: J. Am. Chem. Soc. **44**: 165, 1922.
13. Kenny, C. L.: Dissertation, Columbia University, 1926.

The first series of animals were fed 30 and 50 cc. of milk daily per 300 Gm. initial weight. It was not found possible to feed more than 50 cc. of milk to a 300 Gm. guinea-pig during the day. The first experiments were started in July, 1925, and finished in October, 1925. The two animals receiving 50 cc. of milk daily in the first series were normal during the entire experiment and did not show signs of scurvy on autopsy. The one animal receiving 30 cc. of milk gained in weight steadily until the seventieth day of the experiment, when it began to lose weight rapidly and to show the symptoms of acute scurvy. This animal gave a scurvy score of 11 on autopsy.

TABLE 1.—*Data of Guinea-Pigs Restricted to Basal Diet*

Season	Number of Animals	Average Survival on Diet, Days	Average Scurvy Score at Autopsy	Degree of Scurvy
Summer	2	21	16	Very severe
Fall	3	23	16.5	Very severe
Winter	3	24	18	Very severe
Spring	1	19	19	Very severe

During the rest of the year, animals were fed on 30, 40 and 50 cc. levels. Among the animals receiving 30 cc. of milk daily, no deaths from scurvy occurred before the end of the ninety day experimental period. One animal died at eighty-eight days and another at eighty-four days, the first from hemorrhages in the lungs, the second as the result of an impacted cecum. The scurvy scores for the entire year for the animals receiving 30 cc. of milk varied from 4 to 15, with an average score of 9. In most cases, the animals which had high scurvy scores lost weight beginning with the onset of scurvy at the seventieth to the eightieth day.

For animals fed 40 cc. of milk daily, the average score for the year was 3. The scurvy scores for these animals varied from no score to 7. In most cases the scurvy symptoms were scarcely perceptible in the animals receiving 40 cc. of milk daily when they were alive, but were easily seen on autopsy. A large number of the animals in the group receiving 40 cc. of milk had diseased lungs. The lung trouble first occurred among the animals in January, 1926, and from then on was prevalent among the experimental animals used. All the animals took their full allowances of milk every day in spite of the lung trouble.

Fewer animals were fed 50 cc. of milk daily than 30 or 40 cc., because of the difficulty in feeding and the tendency to digestive disturbances among animals receiving the larger amounts of milk. As was stated earlier, the two animals which received 50 cc. of milk daily in the summer and fall of 1925 were healthy and showed no trace of scurvy on autopsy. Unfortunately, all but one of the remaining animals which received 50 cc. of milk daily showed diseased lungs at autopsy. Only one of these had any signs of scurvy. It died at seventy-nine days and had a diseased liver as well as infected lungs.

In table 2, all the animals receiving 30, 40 and 50 cc. of milk daily have been grouped by seasons. By means of the scurvy score of each animal, the percentage of complete protection afforded by the milk fed has been calculated and the number of cubic centimeters necessary for complete protection has been found. An average of the results obtained on thirty-eight animals tested at all seasons of the year gave 49 cc. as the amount of milk per animal daily necessary for complete protection. This average includes eight animals which were fed 50 cc. of milk daily and were fully protected by this amount. The amounts required for the complete protection of these animals were probably under 50 cc.

The average figure for complete protection for the summer of 1925 was 52 cc. For the fall of 1925, the average number of cubic centimeters of milk required for complete protection by the eight animals in the group was found to be 48 cc. For the winter of 1926, the figure for twelve animals was 51 cc., and for the spring the figure for fifteen animals was 46 cc. Significant differences could not be found to exist, therefore, between the amounts of milk (52, 48, 51 and 46 cc.) required by the animals at different times of the year.

The average of 49 cc. found for the year is strikingly lower than the 80 cc. quoted by Hess and Unger [6] and the from 85 to 130 cc. found by Chick, Hume and Skelton [2] to be the amounts necessary for the complete protection of a guinea-pig from scurvy. The high antiscorbutic potency of this milk is undoubtedly due to the good quality of the ensilage fed to the cows, although it has been reported by Ellis, Steenbock and Hart [14] that ensilage and sauerkraut are both of low antiscorbutic value. In this connection it is interesting to note that sauerkraut, which is similar to ensilage, was considered to be of value as an antiscorbutic more than a century ago, for according to Hess [15] it was kept on hand by "the famous navigator Cook, whose voyages were remarkable for the freedom from illness which his sailors enjoyed and the absence of scurvy."

CONCLUSIONS

It can be safely concluded from this investigation that 50 cc. of the milk used in these experiments, fed six days a week, is sufficient to protect a 300 Gm. guinea-pig from scurvy at any time of the year. As a result of this work it can be concluded also that the milk of stall-fed cows which are given a well balanced, uniform diet throughout the year will not show seasonal variation in its antiscorbutic value. By including an ensilage of good quality in the ration, the antiscorbutic potency of the milk may be maintained at a high level.

TABLE 2.—*Milk Required at Different Seasons for Protection from Scurvy (Experimental Period, Ninety days)*

Season	Number of Animals	Amount of Milk Fed, Cc.	Average Scurvy Score at Autopsy	Degree of Scurvy	Milk Necessary for Protection, Calculated, Cc.
Summer	1	30	11	Severe	55
	2	50	0	None	50
					Av. = 52 cc.
Fall	4	30	8.4	Moderate	48
	4	40	4.1	Mild	49
					Av. = 48 cc.
Winter	3	30	9.8	Moderate	54
	5	40	4.0	Mild	48
	4	50	0.9	Slight	52
					Av. = 51 cc.
Spring	5	30	7.4	Moderate	44
	7	40	2.5	Mild	45
	3	50	0	None	50
					Av. = 46 cc.

Hess estimates that an infant requires five times as much vitamin C as a guinea-pig for protection against scurvy. On the basis of this estimate and these experimental results, it would seem safe to conclude that raw milk from cows fed as described will furnish sufficient antiscorbutic vitamin to protect an infant from scurvy.

14. Ellis, N. R.; Steenbock, H., and Hart, E. B.: J. Biol. Chem. **46**: 367 (April) 1921.
15. Hess, A. F.: Scurvy, Past and Present, Philadelphia, J. B. Lippincott Company, 1920.

THE VITAL CAPACITY OF THE NEGRO CHILD

FRANK L. ROBERTS, M.D.
AND
JAMES A. CRABTREE, M.D.
State Field Directors, Tennessee State Department of Public Health
TRENTON, TENN.

The purpose of this study is to ascertain the vital capacity of a group of normal negro children and compare these vital capacities with those of a group of white children living in the same territory. The negro child forms an integral part of our population and must be considered in any health program. It has been shown that negro children are heavier than white children of the same age and height,[1] and in many other ways the negro physical standard differs from that of the white. For this reason, therefore, it was thought advisable to determine the vital capacity of these children.

In a careful review of the literature but little was found dealing with the vital capacity of negroes. Wilson and Edwards[2] measured thirty-eight normal colored children, and stated that these children had vital capacities definitely lower than white children. Dr. W. G. Smillie of the International Health Board stated[3] that he and Dr. Augustine had measured the vital capacity of negro children in Alabama and found that they had vital capacities definitely lower than white children; the same results were obtained on adults. Foster[4] states that the Chinese have vital capacities lower than westerners. As far as we could learn, these few studies are all that have been made on races other than the white.

MATERIALS AND METHODS

This study is based on observations on 1,564 white children and 1,254 negro children. The children are from rural and urban localities, and form more than 25 per cent of the total school population of the county. This number is therefore an adequate sample of the child population. The children were grouped according to sex. The standing height in centimeters, the weight in pounds, the stem length and the age were ascertained. A Sanborn wet spirometer was used, and the measurements were taken as described in a former paper.[5] Edwards and Wilson[6] have shown that the Sanborn spirometer agrees very closely with their specially constructed instrument.

The average vital capacity, the standard deviation, the coefficient of variation, the probable error of the mean and the probable error of the difference were calculated for each group. The standard deviation was calculated by the formula $SD = \sqrt{\frac{Sd^2}{N}}$, in which SD equals the standard deviation, Sd^2 the sum of the squares of the individual deviations, and N the number of cases. The probable error of the mean was calculated by the formula $PE = 0.674494 \frac{SD}{\sqrt{N}}$, in which SD is the standard deviation and N the number of cases. The probable error of the difference between the vital capacity of the whites and the negroes was ascertained by the equation $PE_{x-y} = \sqrt{PE^2_x + PE^2_y}$, in which PE_x is the probable error of the mean vital capacity of the white children and PE_y is the probable error of the mean for the negro children.

VITAL CAPACITY AND AGE

The vital capacities are tabulated with reference to age. Chart 1 shows these data in graphic form. In children of 6 years and under the vital capacity readings are not satisfactory, for the reason that it is difficult to secure the cooperation of the child. It has been shown by many workers that age is not a very satisfactory index for vital capacity, but it does bring out some significant facts.

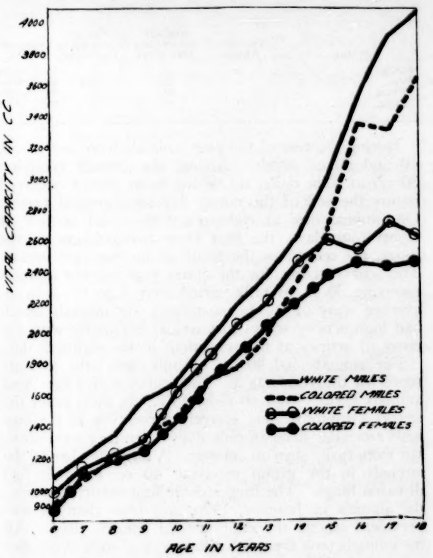


Chart 1.—Relation between age and vital capacity by sex and color.

As will be noticed, the vital capacities of the white boys exceed those of the white girls. This has been demonstrated before. In the case of the colored children this difference is not so marked. The average annual increase in the vital capacity of white boys is 168 cc. up to 13 years of age; from 13 to 18 this increase is 360 cc. The curve shows this acceleration in vital capacity after the thirteenth year. For the colored boys the annual increase is 154 cc. up to 13 years, and 334 cc. thereafter. These increases in the two races agree very closely, and the similarity is shown in the curves.

For the white girls the average annual increase from 6 to 9 years was 137 cc. From 9 to 12 the increase was 236 cc.; from 12 to 15 years, 187 cc., and from

1. Mustard, H. S., and Waring, J. I.: Heights and Weights of Colored School Children, Am. J. Pub. Health **16**: 1017 (Oct.) 1926.
2. Wilson, M. G., and Edwards, D. J.: Diagnostic Value of Determining Vital Capacity of Children, J. A. M. A. **78**: 1107 (April 15) 1922.
3. Smillie, W. G.: Personal Communication to the authors. Smillie, W. G., and Augustine, D. L.: Vital Capacity of the Negro Race, J. A. M. A. **87**: 2055 (Dec. 18) 1926.
4. Foster, J. H.: A Study of Vital Capacity of Chinese, China M. J. **38**: 285-294 (April) 1924.
5. Roberts, F. L.: The Vital Capacity of Children Infected with Hookworm, Am. J. Pub. Health **15**: 774 (Sept.) 1925.
6. Edwards, D. J., and Wilson, May G.: An Analysis of Some of the Factors of Variability in the Vital Capacity Measurement of Children, Arch. Int. Med. **30**: 638-647 (Nov.) 1922.

15 to 18 years it was not increased. In short, there were four phases: a rather slow increase up to 9 years; from 9 to 12 years an acceleration in the vital capacity; from 12 to 15 years a lessened acceleration, and from 15 years onward a tendency for the curve to straighten out.

For the negro girls the average increase is 120 cc. yearly from 6 to 9 years; 194 cc. from 9 to 12 years; 215 cc. from 12 to 15 years, and from 15 to 18 years the curve flattens. This agrees very closely with the curve for the white girls, except that the greatest acceleration is in the third phase instead of the second.

The coefficient of variation was slightly more in the white children than in the negroes. The average coefficient of variation for the white girls was 19.8 per cent and for the negro girls 17.7 per cent. For the white boys the coefficient of variation was 18.4, and for the negro boys 17.5 per cent.

It is evident that there is a marked difference in the vital capacity of the negro and the white. With the boys this difference is four or more times its probable error in every case except the 16 year group. When a difference is four or more times its probable error, it is almost certainly significant. The white girls exceed the colored girls in every case, but only in the 10, 11, 12, 14, 15 and 17 year age groups is the difference significant. We cannot explain why the difference is less marked in the girls than in the boys; it may be due to chance.

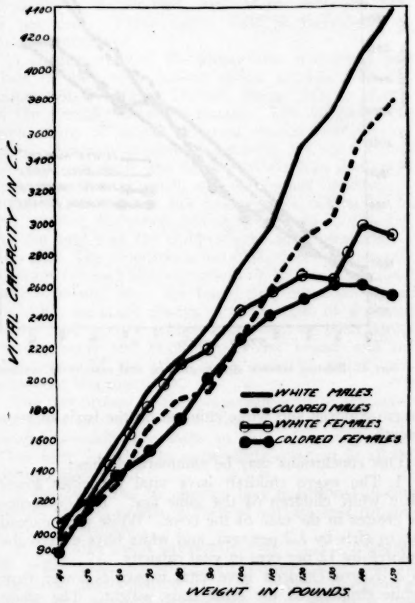


Chart 2.—Relation between body weight and vital capacity by sex and color.

Calculating the difference on a percentage basis reveals that the average difference in the vital capacity of the white girls and the negro girls is 7.2 per cent in favor of the white girls, and that the white boys have capacities averaging 12 per cent more than those of negro boys of the same age.

VITAL CAPACITY AND BODY WEIGHT

Body weight is a much better index for vital capacity than is age. For every 10 pounds (4.5 Kg.) increase in the body weight of white girls examined, there was a corresponding average increase of 171 cc. in vital capacity. The increase seems to be uniform up to 150 pounds (68 Kg.), and thereafter the curve tends to flatten. For each 10 pound increase in body weight of colored girls there is an increase of 156 cc. in vital capacity up to 130 pounds (59 Kg.). After 130 pounds there is practically no increase in vital capacity.

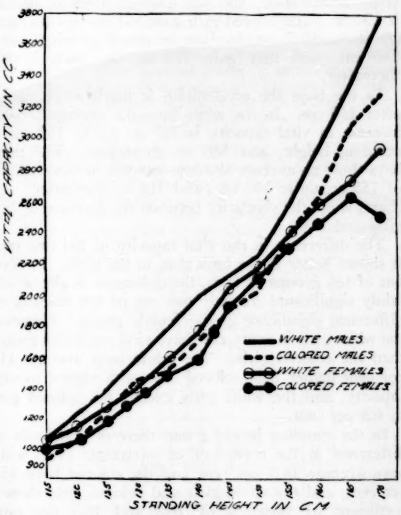


Chart 3.—Relation between standing height and vital capacity by sex and color.

The vital capacity of the colored boys increases 254 cc. with every 10 pound increase in body weight. From 40 to 80 pounds (18 to 36 Kg.), the average increase is 248 cc. From 80 to 130 pounds (36 to 59 Kg.) there is a slight acceleration, the average increase being 255 cc. From 130 to 150 pounds (59 to 68 Kg.) the increase is 294 cc. The white boys show an increase of 309 cc. in vital capacity with each 10 pound increase in body weight. This increase is not uniform, as there are three phases in the curve. From 40 to 80 pounds the average increase is 315 cc. From 80 to 110 pounds (36 to 50 Kg.) the increase is 259 cc., and from this point on there is an acceleration with an average increase in vital capacity of 334 cc.

As shown in chart 2, the white children have greater vital capacity weight for weight than do the negroes. The white boys exceed the colored boys by an average of 14.9 per cent, while the colored girls are 10.2 per cent below the white girls. In the case of the boys, the difference is almost certainly significant in every group

except the 40 pound group, and the difference between the white and the negro girls is significant in every case except the 130 pound group.

VITAL CAPACITY AND STANDING HEIGHT

For each 5 cm. increase in standing height the white girls show an average absolute increase of 139 cc. in vital capacity up to 140 cm. After 140 cm. there is a slight acceleration, and the average absolute increase is 194 cc. The colored girls gain 111 cc. in vital capacity for each 5 cm. increase in standing height up to 140 cm., and they gain 170 cc. for each increase thereafter.

In the boys the acceleration is much more marked after 150 cm. In the white boys the average absolute increase in vital capacity is 167 cc. up to 150 cm. in standing height, and 386 cc. thereafter. The negro boys show an average absolute increase in vital capacity of 155 cc. up to 150 cm., and 311 cc. thereafter. The charts show the similarity between the increase of both girls and boys.

The difference in the vital capacity of the two races is shown better in the boys than in the girls. In seven out of ten groups of boys, the difference is almost certainly significant. In only two out of ten cases is the difference significant in the female group. However, the white girls in every case have vital capacities greater than the colored girls. The white boys average 11.2 per cent higher than colored boys with regard to vital capacity, and the white girls exceed the colored girls by 6.8 per cent.

In the standing height group there is practically no difference in the coefficient of variation. The white boys average 14.9 per cent and the colored boys 15.6 per cent, and the white girls and colored girls show a coefficient of variation of 16.3 and 16.5 per cent, respectively.

VITAL CAPACITY AND SITTING HEIGHT

When the vital capacities of negro children are compared with those of white children on the basis of sitting height, we find that there is no significant difference. In only five out of twelve groups do the white girls exceed the negro girls, and not one of the differences is significant. In seven out of twelve groups the negro girls exceed the white girls. In six out of twelve groups the white boys have vital capacities slightly greater than those of the negro boys, and in the other six cases the negro boys exceed the white boys.

For each 2 cm. increase in stem length the white boys gain 171 cc. in vital capacity up to 79 cm.; at this point there is an acceleration, and the increase from 79 cm. to 85 cm. amounts to 253 cc. for each 2 cm. group. The negro boys show an increase of 139 cc. in vital capacity for each 2 cm., an increase in stem length up to 75 cm., and from there on the increase is 296 cc.

The white girls show a fairly uniform average increase of 151 cc. in vital capacity for each 2 cm. increase in stem length. The negro girls show an average increase of 133 cc. in vital capacity up to 73 cm. in stem length. After 73 cm. there seems to be a slight acceleration of the negro girls, as they show an average increase of 152 cc. in vital capacity for each 2 cm. increase in stem length.

The coefficient of variation is practically the same for negro children and white children, the average being 16.5 per cent for the white girls, 16.8 per cent for the negro girls, and 14.4 and 15.8 per cent for the white and negro boys, respectively.

SUMMARY AND CONCLUSIONS

We found in our study of the vital capacities of negro children that they are definitely lower than those of the white children of the same age, body weight, and standing height. The difference is not so marked as in the groups studied by Smillie and Augustine, but is a marked and significant difference. We noted in nearly every group of white children studied by us that the vital capacities were lower than those recorded by Smillie and Augustine. This will probably account for the smaller differences in our group. We did not find a significant difference in the vital capacities of the

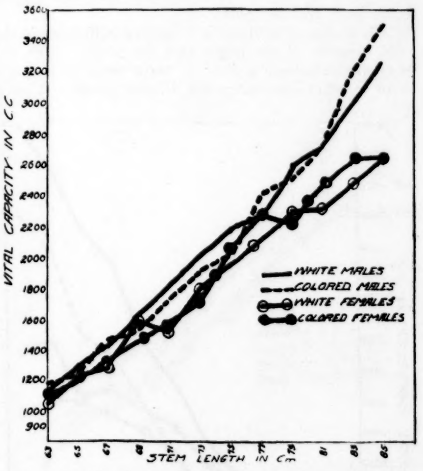


Chart 4.—Relation between stem length and vital capacity by sex and color.

negro children and white children on the basis of stem length.

Our conclusions may be summarized thus:

1. The negro children have vital capacities lower than white children of the same age. The difference is greater in the case of the boys. White girls exceed negro girls by 7.2 per cent, and white boys exceed the colored by 12 per cent in vital capacity.

2. Negro children have vital capacities lower than white children of the same body weight. The white girls exceed the colored girls by 10.2 per cent, and the white boys exceed the negro boys by 14.9 per cent in lung capacity.

3. Negro children have vital capacities lower than white children of the same standing height. The white girls show vital capacities averaging 6.8 per cent higher than negro girls, and the white boys have vital capacities that average 11.2 per cent higher than those of negro boys.

4. Negro children have vital capacities practically the same as those of white children of the same stem length.

DISTURBED SURFACE AREA PROPORTIONS IN A CASE OF SUSPECTED OVARIAN HYPERFUNCTION *

SAMUEL GORDON BERKOW, M.D.
PERTH AMBOY, N. J.

A previous report [1] demonstrated that the surface area proportions of the head, trunk, upper extremities and lower extremities are nearly constant in adults, and that in infants and children the proportions of these parts are different, varying with age until, gradually, adult proportions are assumed. The head, it was demonstrated, decreased from 18 per cent of the total area at birth to 6 per cent in the adult; the lower extremities increased from 25 per cent at birth to 38 per cent in the adult. The trunk and upper extremities varied less progressively. The extremes of variation from the average proportions of seventeen adults of various physical conformation were: head, + 0.8 and — 0.4; upper extremities, + 1 and — 2.9; trunk, + 6 and — 2.3, and lower extremities, + 2 and — 4.2.

The component parts of the upper extremities were: arms, 26 per cent; hands, 73 per cent; lower extremities: thighs, 50 per cent; legs, 32 per cent, and feet, 17 per cent. These varied little in individuals of different physique.

A further study of the proportions in children was made in the Perth Amboy public schools, with the cooperation of Mazie Traimen Berse, then in charge of the mentally defective classes. The children measured were of widely different mental and physical types. Attempts to establish a normal average for each age were not made, the number of children that could be measured being small, and the explicit approval of the school authorities not having been obtained. In this manner, thirty-two children were measured, bringing the total with the children previously measured to fifty-six. The proportions were found to be practically constant for each age, regardless of stature, nutritional state or mental age. We found that, given the age of the child, we could always state the ratio of the head to the total surface within 1 per cent of what actual measurements and calculation would reveal, and the proportions of the other parts could be stated with somewhat less exactitude.

The proportions of the component parts of the upper and lower extremities were found not to vary with age, being essentially the same in the infant and adult. They were found to be particularly constant in all the persons measured.

It is interesting to observe that nutritional disturbances, such as rickets, influenced surface area proportions very slightly.

It was also noted previously that "B. L., a cretin, 36 years old, measured by Delafield and Eugene Du Bois,[2] and reported by them to have the general mental and physical development of a boy of 8, had the proportions found at 8 years of age, except for the upper extremities. Whether disproportions of various kinds typify different forms of endocrine imbalance is a problem which at once suggests itself."

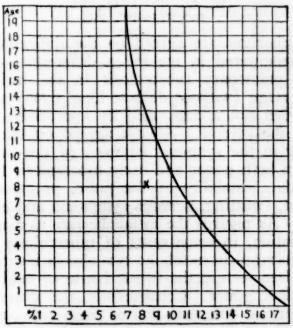
The present report concerns a case of suspected ovarian disturbance in a child, aged 8 years, in whom the surface area of the head represents a different proportion of the total body surface from what has been observed in any other child of that age.

REPORT OF CASE

F. S., a girl, born Oct. 5, 1918, was admitted, Oct. 18, 1926, to the pediatric clinic at Post-Graduate Medical School and Hospital. The mother complained that the child had been bleeding vaginally for six months, a few spots of blood being observed on the child's drawers every day. The bleeding was not periodic, although the mother stated that the amount of hemorrhage varied, never being profuse. Recently, the bleeding had been slightly augmented in volume. Other complaints were not present, the child being otherwise in good health. She was well up in her grade at school. A painstaking inquiry did not elicit a history of masturbation. Physical examination (made by Drs. Bergman and Kurzweil) was negative, except for a protuberant abdomen. Masses were not felt in the abdomen.

The child weighed 73½ pounds (33.4 Kg.) and was 51 inches (129.5 cm.) tall. The temperature was 98 F.; the pulse, 104, and the respiration, 22. She was well nourished.

She was referred to the gynecology clinic of Professor West for further examination. Pelvic examination by Dr. Conterno, Dr. Robertiello and myself of that clinic, and by Dr. Moench and Dr. Church of Professor Furniss' clinic, revealed the hymen intact, but the vaginal orifice admitted the tip of the fifth finger; rectal examination was negative except for a slight enlargement of the uterus. A cotton-wrapped applicator introduced into the vagina was found on withdrawal to be blood-tinged.



Curve representing proportion between head and total surface area in children. The percentage area of the head of the patient is marked by a cross.

On the basis of these observations, largely negative, a diagnosis of ovarian hyperfunction was made, Dr. Kurzweil of the pediatric department disagreeing. I then measured the child according to the linear method of Delafield and Eugene Du Bois,[2] and the proportions of the head, trunk, upper extremities (arms and hands) and lower extremities (feet, legs and thighs) were computed from these measurements. The measurements were: head, 8.5 per cent; trunk, 38.7 per cent; upper extremities, 16.7 per cent; lower extremities, 35.9 per cent.

COMMENT

These data differ materially from the average for the age group only in the proportion of the head, which is fully 2 per cent less than the ratio between that part and the total surface in other children 8 years old. This is nearly twice the variation encountered heretofore in the most divergent cases in one age group. The difference is in favor of the adult type. The accompanying chart gives the curve of head proportions from

* From the Gynecology clinic of Professor West, New York Post-Graduate Medical School and Hospital.

1. Berkow, S. G.: A Method of Estimating the Extensiveness of Lesions (Burns and Scalds) Based on Surface Area Proportions, Arch. Surg. **8**: 138 (Jan.) 1924.

2. Du Bois, Delafield; and Du Bois, E. F.: The Measurements of the Surface Area of Man, Arch. Int. Med. **15**: 868 (May) 1915.

infancy to 20 years and marks the relative position of the head in this case.

The remaining proportions are within the usual limits. The components of the upper and lower extremities exhibit the usual ratios. The arms are 72.2 per cent; hands, 27.7 per cent of the upper extremities; the thighs are 50.6 per cent; the legs, 30.7 per cent, and the feet 18.6 per cent of the lower extremities.

The assumption of an abnormal disproportion of the head in this child does not warrant the conclusion that this abnormality can be linked with the symptoms complained of. However, it does seem significant that the greatest disparity in proportions has been observed in a case of known endocrine disturbance (the cretin) and in a case of suspected imbalance. It serves to strengthen the hypothesis, supported by the known influence of these glands on growth, that a mathematical index of endocrine imbalance may be derived from a further study of proportions.

TUBERCULOSIS AND GOITER*

E. P. SLOAN, M.D.
BLOOMINGTON, ILL.

All authorities are agreed on the difficulties sometimes encountered in making a differential diagnosis between pulmonary tuberculosis in the incipient or minimal stage (without definite lung signs) and early goiter when not accompanied by appreciable enlargement of the thyroid. All are agreed on the striking similarity in the symptom complex of the two conditions. In both goiter and early tuberculosis there are tachycardia, instability of the pulse, progressive loss of weight, sweating, nervous symptoms and emotional changes. As regards the metabolic rate as a means of differentiation, in some cases of tuberculosis there is a slight increase in metabolic rate almost identical with that so often seen in the forme fruste or mild type of exophthalmic goiter. Consequently, this criterion also fails us in the differentiation of these two conditions.

In both conditions are found sympathetic disturbance and loss of weight despite increased appetite. If to the foregoing syndrome there is added the appearance of a mild or moderate thyroid enlargement, especially in the female during puberty or pregnancy, a diagnostic problem is presented that sometimes will baffle the most acute observer. The symptoms of the two conditions are often similar; indeed, almost identical. One is inclined to think that in many cases they actually are identical: in other words, that both are present. Many are inclined to believe nowadays that the exciting cause of exophthalmic goiter, in the great majority of cases, is infection. If this is so, one can hardly conceive of normal thyroid function in the presence of the long drawn out toxemia of tuberculosis. A toxemic dysfunction of the thyroid will explain many of the symptoms of atypical tuberculosis.

THYROID CHANGES IN PULMONARY TUBERCULOSIS (?) AND THEIR CORRELATION WITH SYMPTOMS

Is there any pathologic basis for a theory of thyroid dysfunction in tuberculosis? Unfortunately, the subject of thyroid disease in tuberculosis has not received the attention its importance demands. Reports of very few thyroidectomies done in the early stages of tuberculosis have been published; consequently very little information as to the pathologic changes in the gland at this time is available. This fact is of great significance, as it is precisely in the early stages of tuberculosis that there are most often marked symptoms of thyroid dysfunction. There is, however, a wealth of autopsy statistics relative to patients dead of tuberculosis, and, according to these statistics, sclerosis of the thyroid is very common in advanced tuberculosis. Now, it is a frequent clinical observation that as the tuberculosis advances the symptoms suggestive of thyroid disturbance show some tendency to improve.

Correlation of these two facts leads to the formulation of an inviting hypothesis as to the changes that actually take place in the thyroid gland. The sclerosis found in the advanced case is, of necessity, a secondary or late stage of inflammation. Antedating the sclerosis one may presuppose toxemic stimulation and inflammatory change, and inflammatory change in thyroid tissue is, in my opinion, always attended with symptoms of thyroid dysfunction.

ACTIVE TUBERCULOUS LESIONS OF THE THYROID

The thyroid apparently does possess some degree of immunity against actual bacillary invasion and the resulting destructive or fibrotic change.

The idea that, in the majority of cases, the sclerosis and antecedent hyperplasia are due to toxemia rather than to bacillary invasion finds definite support in the fact that sclerosis of the thyroid has been found in the new-born children of tuberculous mothers. Even without the aid of statistics, it would perhaps be reasonable to conclude that in a structure as vascular as the thyroid, chronic caseous tuberculosis must of necessity be rare.

Tuberculous lesions, however, do occur. Last December, in Detroit, I was furnished two patients for demonstration in a diagnostic goiter clinic on whom thyroidectomies had been done within the last year. Both patients were in rather advanced stages of pulmonary tuberculosis. Removal revealed tubercles disseminated throughout both glands. Tubercle bacilli were present not only within the tubercles that were visible macroscopically but also in other portions of the gland. Both patients following thyroidectomy were greatly improved and are carrying their active pulmonary tuberculosis with progressive appreciable improvement in their condition.

Tubercles in the thyroid are common in cases of miliary tuberculosis; Weigert examined the thyroid in eleven cases of miliary tuberculosis and found tubercles in every case. Lesions of chronic tuberculosis are also found. Chiari found tuberculous lesions in the thyroid in 7 per cent of a series of autopsies in cases of pulmonary tuberculosis. Fraenkel found lesions in six of fifty cases examined. Depending on their extent and the degree of secondary inflammatory changes in the gland, these lesions may, of course, cause symptoms of goiter.

IODINE CONTENT OF THE THYROID IN TUBERCULOSIS

Unfortunately, sufficient work along this line has not been done. Gautier, however, found the iodine decreased or absent. I have, in addition, an interesting observation to offer. Years ago some of the supposedly early cases of tuberculosis showed a distinct improvement, especially lowered pulse rate, consequent on the use of the crude cod liver oil then obtainable. I believe now that the improvement, which was then

* Read before the Chicago Tuberculosis Society, March 10, 1927.

attributed to the nutritive qualities of the oil, was in reality often due to the iodine and other mineral salts which it contained, and that a percentage of the cases that improved on this treatment were really cases of atypical exophthalmic goiter rather than tuberculosis. I have not noted the same improvement in similar cases consequent on the administration of the refined cod liver oil of recent years. The reason for this, I think, may be that in the refining process the mineral content, especially the iodine content, of the oil is appreciably lessened.

THREE TYPES OF DIAGNOSTIC PROBLEM IN EARLY CASES

In the differential diagnosis of early tuberculosis and exophthalmic goiter, there are three possibilities to be considered:

1. The incipient case of tuberculosis, without demonstrable lung lesion, resembling mild exophthalmic goiter.
2. The forme fruste or mild type of exophthalmic goiter resembling early tuberculosis.
3. Coexistent tuberculosis and goiter.

Rest is fortunately the essential element in the treatment of all these conditions, and it is possible that some cases of forme fruste exophthalmic goiter, after a rest of from three to six months in sanatoriums, are considered "arrested cases" of pulmonary tuberculosis and the patient is discharged. It is possible that some in the third group, patients having both mild tuberculosis and mild goiter, are discharged as having arrested tuberculosis; and rightly, too, as the tuberculosis is arrested, though the thyroid is still active or toxic. These patients have a pulse rate higher than is consistent with the temperature curve.

The diagnosis, of course, is most important, and with patience can be made in most cases. Too much reliance is being placed on so-called specific tests and complicated laboratory procedure. The Goetsch test and the tuberculin test point the wrong road perhaps more often than they point the right road. For the differentiation of these confusing syndromes, clinical judgment and experience are much more important than refined laboratory technic. We should bear in mind in considering these and similar conditions the famous dictum of John B. Murphy, "Diagnoses are made with cortical cells rather than with instruments of precision." An early diagnosis may save the patient years of anxiety and invalidism and much needless expense incurred in sanatorium care and perhaps climatic wanderings.

COEXISTENT TUBERCULOSIS AND GOITER

Incidence.—Fishberg of New York says, "It is well known that quite a large proportion of the tuberculous patients present signs of hyperthyroidism, such as more or less bulging eyes, tachycardia, slight tremor, hot flashes, sweating, dermographism and even enlargement of the thyroid gland."

In fifty cases of exophthalmic goiter seen by Saathoff, evidence of mild tuberculosis was found in forty-eight. The two remaining cases were more advanced and showed bacilli in the sputum. Caro examined 486 men of the thyroid diathesis, and found evidence of apical trouble in 210. Schinzinger, in a group of 521 tuberculous patients, discovered signs and symptoms in 191 that suggested very strongly the coexistence of exophthalmic goiter. Many other writers quote a goiter incidence of from 4 to 8 or 10 per cent among their tuberculous patients. These figures show that the coexistence of goiter and pulmonary tuberculosis is not, by any means, a rare condition.

This opinion as to the rather frequent coexistence of the two conditions is not shared by all authorities. In one of the recent books on goiter, the statement is made that the author had never seen a case of coexisting goiter and tuberculosis. A few years ago the superintendent of a large tuberculosis sanatorium in one of the largest cities of the South asserted that he had seen 18,000 cases of tuberculosis and had not in a single instance found evidence of coexisting active or toxic goiter. He asserted positively that tuberculous patients are immune to goiter. I ventured the assertion that in Illinois, where the goiter problem had received considerable attention, no tuberculosis specialist could be found that would make such an assertion, because our tuberculosis specialists look for and find other abnormal conditions when they are present besides tuberculosis.

Reaction of One Disease on the Other.—Some authorities believe that "hyperthyroidism" exercises a beneficent influence on tuberculosis. This hypothesis hardly seems logical. In a disease in which metabolism is already upset, it is difficult to see how goiter, with its marked influence on the metabolic rate, can possibly have a beneficent influence. In tuberculosis, a disease characterized by prolonged toxemia, it hardly seems logical to suppose that goiter, another disease characterized by prolonged toxemia, should have a beneficent influence. The symptoms of each disease seem, as it were, to pull in the same general direction. It is difficult to understand how the sum of the symptoms of both diseases can pull in an opposite direction. If a man is struggling under a load, one does not make his way easier by placing another load on his back.

The erroneous conception concerning the favorable influence of goiter on tuberculosis could not have arisen if the pathologic sequence of the changes in the thyroid gland had been kept in mind. Quite early in tuberculosis there is evidence of toxemia. The toxemia of tuberculosis exercises a noxious influence on the thyroid tissue; after some time there is evidence of thyroid dysfunction. The summation of the symptoms of both diseases causes, I am inclined to think, the extremely toxic symptom complex that sometimes is seen in certain early cases of pulmonary tuberculosis in which the condition in the chest is insufficient to account for the severe illness of the patient. Finally, as a result of prolonged and continuous toxemia, degeneration or sclerosis of the thyroid tissue with obvious enlargement of the gland takes place, and with this degeneration a consequent reduction or disappearance of the thyroid symptoms occurs.

With the disappearance or decrease of symptoms of thyrotoxicosis, the general condition of the patient seems to undergo a relative improvement. This relative improvement, which often occurs at about the time that increase in the size of the gland is observed, is probably the basis for the belief that goiter exercises a favorable influence on tuberculosis.

It should not be forgotten, however, that a noxious thyroid secretion, allowed to operate for long periods during the early stages of the disease, has probably done irreparable harm that could have been profitably and efficiently prevented by early proper thyroid treatment.

Sanatorium Treatment.—Probably some cases of exophthalmic goiter subside or are greatly improved as the result of a rest period of three or six months

in a sanatorium. The cases of coexisting exophthalmic goiter and tuberculosis are also greatly benefited. As the tuberculosis becomes arrested, the toxemic irritant to the thyroid is removed. The patient experiences simultaneous improvement in the two diseases.

Medical Treatment.—The medical treatment will follow along the general lines of treatment for tuberculosis, summarized as rest and hygiene.

As regards the use of iodine, even as a preoperative measure, more care is necessary than in the ordinary case of exophthalmic goiter. In the active case of tuberculosis, the exhibition of iodine is said by authorities on tuberculosis to be liable to upset the digestive apparatus and even to provoke a hemorrhage, and this fact must be borne in mind.

Surgical Treatment.—Indications: Considerable prejudice exists in some quarters against operative procedures of consequence in the presence of pulmonary tuberculosis. One of the greatest of pioneer surgeons said in his Golden Rules of Surgery, "Pulmonary tuberculosis is always a contraindication for any serious operation." Undoubtedly this is justifiable to some extent. A prolonged operation, particularly under general anesthesia, exercises a deleterious influence on the condition of the actively tuberculous patient. An ether anesthetic should not under any circumstances be given in the "open case" of tuberculosis, except in the face of an emergency. However, thyroidectomy today has become so simplified that in an emergency it may be applied without detriment even in the actively tuberculous case for relief from severe thyrotoxicosis. Local or gas anesthesia may be used in practically all cases. The preparation and psychic control of the patient may demand a little more time and patience, but the end-results achieved justify the effort.

As regards the direct indication for operative treatment, it is largely a question of individual judgment and experience. The early stage of tuberculous involvement, when the thyroid dysfunction is also in all probability quite recent, is of course the ideal time for operation. But the difficulty of making a positive diagnosis of goiter that demands operation is so great at this stage that such operations are rare indeed. It would take a brave surgeon to undertake operation in such cases before the result of sanatorium treatment has been determined. So the diagnosis and the treatment of the early cases will necessarily remain in the field of the tuberculosis specialist.

Cases That Are Surgical.—First, the chronic tuberculous patient whose condition has been repeatedly classified as arrested and who now has a toxic goiter. The goiter may be either the exophthalmic or the toxic adenoma type. A pulse rate higher than is consistent with the temperature curve is the one symptom that is present in almost every case. Other symptoms are, of course, present according to the kind of goiter and its stage of development. Surgical treatment is very satisfactory in this class of cases.

Second, the tuberculous patient who has improved under sanatorium care and shows arrest of the symptoms of tuberculosis but who still has an active goiter. Symptoms of mild exophthalmic goiter with the cardiac symptoms predominating are usually present. Thyroidectomy completes the cure.

Third, the patient with advanced pulmonary tuberculosis who has a goiter of long standing when a rapid increase in the severity of the symptoms due to the coexistence of tuberculosis toxemia and thyrotoxicosis develops rather suddenly. Removal of the goiter is usually followed by spectacular improvement. The inevitable death of the patient from tuberculosis is probably merely postponed. But the immediate results are so satisfactory that the operation is justified. Usually, it may be said, if the patient has resistance to carry the load of both diseases she should improve remarkably when the thyroid toxemia is removed.

Contraindications.—In a general way, if the nature and extent of the tuberculous lesion is such that hope of arrest or recovery is out of the question, even if the load of thyrotoxicosis is removed, operation is contraindicated.

REPORT OF CASES

In the last fifteen years I have operated on more than 400 patients who were known to be tuberculous before operation, and practically all have gained in weight and made satisfactory improvement. A few of these may be reported briefly:

CASE 1.—Margaret O., aged 19 years, operated on in May, 1915, had been under treatment for five years for tuberculosis. Several laboratory examinations were positive. She had some rise of temperature afternoons, especially during and after the menstrual periods. She ate ravenously but weighed only 94 pounds (42.6 Kg.). The pulse rate was from 150 to 170. The goiter was removed under local anesthesia. In one week the pulse rate dropped to below 100, and October 3 of the same year her weight was 134 pounds (61 Kg.). She is living today, and seems to have recovered from the tuberculosis.

CASE 2.—Mrs. C. J. had a positive diagnosis of pulmonary tuberculosis made at various times during 1912, and again in 1914 and 1915. She developed marked symptoms of exophthalmic goiter in 1916. Operation with local anesthesia was done in August, 1916. The pulse rate dropped from 140 to 84. Her nervousness and insomnia disappeared. She gained 32 pounds (14.5 Kg.) in four months, and seems well at the present time, ten years after her thyroidectomy.

CASE 3.—Miss B. G., aged 23, a student at the University of Illinois, had been tuberculous for years. Tubercle bacilli were found in the sputum at various times. She developed symptoms of exophthalmic goiter during the winter, and a hyperplastic goiter was removed, April 2, 1917. She returned to school in eight days. Her pulse dropped from 150 to 88. Nervousness, insomnia and the afternoon rise of temperature disappeared. She finished her college course, and now, nine years after the operation, is married and is the mother of a 4 year old child and seems to be in perfect health.

SUMMARY

The rather frequent coexistence of goiter and tuberculosis is not sufficiently appreciated.

Diagnostic difficulties are great, owing to the similarity of the clinical picture in the two diseases.

The sequence of pathologic change in the thyroid explains the relative severity of the two diseases at different periods.

Three Types of Diagnostic Problem in Early Cases.—1. The incipient case of tuberculosis, without demonstrable lung lesion, resembling exophthalmic goiter.

2. The forme fruste type of exophthalmic goiter resembling early tuberculosis.

3. Coexistence of tuberculosis and goiter; coexistence of the two diseases, which is comparatively frequent, as shown by statistics.

Three Types of Cases That Are Sometimes Surgical.—1. Chronic tuberculosis with toxic goiter.

2. Arrested tuberculosis with toxic goiter.

3. Acute cumulative toxemia resultant from coexisting pulmonary tuberculosis and toxic goiter.

Treatment.—Early cases: medical; rest and hygiene as for tuberculosis. Late cases: surgical when positive symptoms of thyrotoxicosis are unquestionably present.

THE OCCURRENCE OF STAPHYLOCOCCUS AUREUS INFECTION WITH A SCARLATINIFORM RASH *

FRANKLIN A. STEVENS, M.D.
NEW YORK

Considerable advance has been made in the last few years in the diagnosis of scarlet fever. While the typical case has seldom confused the experienced clinician, the diagnosis of many borderline cases has been difficult. These atypical exanthems have fallen into two groups. The first group comprises cases resembling scarlatina in many respects yet with sufficient deviation from the usual signs and symptoms to render the diagnosis questionable. Filatow [1] and Dukes [2] have described epidemics of such peculiar exanthems. Sporadic instances of infection also occur. The second group includes the exanthems associated with surgical infections. Malfatti [3] described puerperal scarlatina in 1801, and Paget [4] noted in 1864 that scarlet fever might accompany the infection of wounds. Since the etiology of scarlet fever has been established, we know that puerperal and surgical scarlatina occur; but clinical diagnosis is difficult unless the infection follows intimate contact with known cases of scarlatina. After studying the situation carefully, Litten [5] believed that in most instances accurate diagnosis was impossible.

Since Dochez [6] described the preparation of an antitoxic serum with cultures of the streptococcus isolated from scarlet fever, and the Dicks [7] published their account of the toxin occurring in filtrates of similar hemolytic streptococci, accurate methods of diagnosis have been available. Some of these methods are more practical than others. The least time consuming is a modification of the Schultz-Charlton test with convalescent scarlatinal serum. When either convalescent serum or scarlatinal antitoxin is injected intracutaneously in an area covered with a florid rash, blanching occurs in approximately twenty-four hours. This test is apparently quite specific. It occurs only in scarlatinal rashes. Those which are known to be due to other causes do not blanch. The second procedure is time consuming and requires technical skill. Cultures of the throat or wound are examined for the presence of hemolytic streptococcus. If this streptococcus is not found in three or four cultures made when the rash first appears, scarlet fever is excluded. If the streptococcus is found, a presumptive diagnosis is possible if the clinical picture closely resembles scarlatina. In questionable cases several colonies are transferred to broth, and after four days filtrates of these cultures are studied for the presence of scarlatinal toxin. Other methods are available, but they are either too technical or have not been sufficiently substantiated to be employed as routine procedures.

We have observed a number of exanthems in which there was considerable doubt as to the diagnosis. The methods just enumerated were applied in these instances to reach an accurate conclusion as to the etiology. A great majority were proved to be scarlatina. Instances have occurred in which one or the other of the methods failed—the rash did not blanch or the scarlatinal streptococcus was not recovered. In the majority, however, the results of one or both of the procedures were positive. In rare cases neither the culture nor the skin test gave evidence of scarlatinal infection. In three such cases we have isolated *Staphylococcus aureus*. In these instances the bacteriologic and immunologic data show that the entire picture was the result of infection with staphylococcus.

CLINICAL AND BACTERIOLOGIC DATA

The three cases of *Staphylococcus aureus* infection were first studied to eliminate the possibility of infection with the hemolytic streptococcus. Secondly, the staphylococcus isolated in each case was studied to show that it was responsible for the rash. With a few modifications, the methods employed in the study of the streptococcus were applied to the investigation of the staphylococcus. Blanching tests were done in the same manner with staphylococcus antitoxic serum as they have been done in the past with scarlatinal antitoxin. The details of the methods employed in demonstrating scarlatinal toxin in streptococcus filtrates need not be given. They have frequently been fully described in the recent literature. To obtain the toxin with *Staphylococcus aureus*, the strains were grown in 4 per cent peptone broth for four days in an atmosphere of carbon dioxide. Filtrates from these cultures were injected into the skin of rabbits, and the sites of the inoculations were carefully observed for inflammation and necrosis. Neutralization experiments were then done to prove the specificity of this cutaneous reaction. Filtrate and staphylococcus antitoxic serum were mixed, incubated and injected intracutaneously. Controls were prepared with filtrate and antiscarlatinal serum. Three antiscarlatinal serums were tested before one was found that did not contain appreciable amounts of staphylococcus antitoxin. This was a highly potent scarlatinal antitoxin and was employed in these control reactions. The results of the bacteriologic studies have been included with the clinical data in the following case histories:

REPORT OF CASES

CASE 1.—A girl, aged 12 years, had several hordeola in succession. Six weeks later a sudden sharp pain in the thigh was accompanied by a chill and fever. She was nauseated. Her temperature was 102.5 F. The following day a scarlatiniform rash appeared on the chest and face. The thigh was not painful but was tender on pressure. The rash slowly extended to the extremities and abdomen. The progression of the rash was typical of scarlet fever but not as rapid. It was never well marked over the extremities. There was slight circumoral pallor, and the margins of the tongue were red. She did not admit angina, but the throat appeared slightly inflamed. After three or four days the rash faded, disappearing from the face and body first. Moderate fine desquamation was observed ten days later. The thigh continued to be tender and required surgery. A collection of pus was found, which yielded a pure culture of *Staphylococcus aureus*.

Cultures were obtained from the throat of the patient on the second and third days of illness, but hemolytic streptococcus was not found. On the second day 0.5 cc. of scarlatinal antitoxin was injected into the skin of the abdomen, but the rash did not blanch at the site of inoculation. Filtrates

---

* From the Department of Medicine, Columbia University College of Physicians and Surgeons.

1. Filatow, N.: Vorlesungen über akute Infections-Krankheiten im Kindesalter, Vienna and Leipzig, 1897, p. 382.
2. Dukes, C.: On the Confusion of Two Different Diseases under the Name Rubella, Lancet **2**: 89, 1900; On the Features Which Distinguished Epidemic Roscola from Measles and from Scarlet Fever, ibid. **1**: 791, 1894.
3. Malfatti, quoted from Nothnagel, American edition, Philadelphia, W. B. Saunders Company, **2**: 393.
4. Paget, J.: Clinical Lecture on Scarlatina After Operations, Brit. M. J. **2**: 237, 1864.
5. Litten, M.: Ueber septische Erkrankungen, Ztschr. f. klin. Med. **2**: 431, 1881; Beiträge zur Lehre von der Scarlatina, Charité-Ann. **7**: 173, 1882.
6. Dochez, A. R.: Studies Concerning the Significance of Streptococcus Hemolyticus in Scarlet Fever, Proc. Soc. Exper. Biol. & Med. **21**: 184 (Jan. 16) 1924.
7. Dick, G. F., and Dick, Gladys H.: A Skin Test for Susceptibility to Scarlet Fever, J. A. M. A. **82**: 265 (Jan. 26) 1924.

obtained from a culture of the staphylococcus isolated from the pus gave necrosis when injected into the skin of a rabbit. This cutaneous reaction was prevented when staphylococcus antitoxic serum was mixed with the filtrate. Scarlatinal antitoxin did not prevent the necrosis.

CASE 2.—A child, aged 8, complained of angina one forenoon. When seen, two days later, the temperature was 104 F. The fauces were then intensely swollen and the submaxillary chains of lymphatic glands were enlarged and tender. The face and body were covered with a fine punctate erythema, which was most marked over the chest and in the axillae. The cultures of the throat at this time showed numerous colonies of *Staphylococcus aureus* but none of hemolytic streptococcus. Intracutaneous injections were made with both staphylococcus and scarlatinal serums. No blanching occurred at the site of the inoculation with the scarlatinal antitoxin. The staphylococcus serum gave partial blanching over an area 6 cm. in diameter. The blanching was not as intense as that usually occurring in scarlatinous rashes after intracutaneous injection of scarlatinal antitoxin. The exanthem had completely faded on the sixth day of illness. Pus containing *Staphylococcus aureus* was obtained from an incision into the left peritonsillar area on the tenth day. Moderate desquamation began twelve days after the onset.

Cultures of the staphylococcus from the pus were made in proteose peptone broth. The filtrates produced necrosis in the skin of rabbits. This necrosis was prevented by staphylococcus but not by streptococcus serum.

CASE 3.—The history of this case is so similar to the one preceding that the clinical details are not given. The throat cultures showed numerous *Staphylococcus aureus* colonies and a few of hemolytic streptococcus. This streptococcus did not produce toxin. The rash was partially blanched by an injection of *Staphylococcus aureus* serum, but no such effect was observed with scarlatinal antitoxin. In this case a peritonsillar abscess apparently opened spontaneously. The staphylococcus obtained from the throat culture produced a toxic substance with necrotizing properties similar to those of the strains from the other cases. We were unable to obtain blood from these cases for observations on the antitoxic content of the serum.

COMMENT

The essential facts concerning the mechanism of the toxemia and the rash in scarlet fever are now fairly well understood. The exanthem is apparently caused by the toxin of *Streptococcus scarlatinae* in the blood. When antitoxin appears in the circulation in sufficient quantities, the toxin is neutralized.[8] The rash then fades and the growth of the organism in the throat is inhibited. The blanching phenomenon is merely the expression of a local passive antitoxic immunity. Many adults who have not had scarlet fever have sufficient circulating antitoxin to give a negative Dick test and to prevent the occurrence of a rash in event of infection with streptococci that produce scarlatinous toxin.[9] In some of these individuals there is apparently sufficient antitoxin to prevent initial infection with these bacteria; in others, pyogenic infections may occur but there is no exanthem.

The literature is replete with references to the toxic properties of filtrates of cultures of *Staphylococcus aureus*. Many of these references are as significant as certain of the older contributions on the relationship of the hemolytic streptococcus to scarlet fever. Von Lingelscheim[10] observed necrosis in the skin of rabbits after the intracutaneous injection of filtrates of the staphylococcus. Later Neisser and Wechsberg[11] repeated these experiments. They found that the toxic property of the filtrates was destroyed at 56 C. and that rabbits could be immunized both actively and passively. The immunized rabbits no longer reacted to intracutaneous inoculations with the active filtrates. Parker,[12] who prepared the antitoxic serum employed in these experiments, has found that neutralization tests may be carried out in animals with filtrates and serums similar to the neutralization of scarlatinal toxin in the human skin. Several types of reactions occur when these filtrates are injected intradermally in man. Coenen[13] has described a reaction similar to that obtained with tuberculin. In addition he describes a generalized erythema with headache, fever and vomiting, occurring in children after single injections of filtrate. These reactions in children are most noteworthy since they resemble the reactions with Gabritchevski's[14] vaccine and reactions more recently obtained with filtrates of *Streptococcus scarlatinae* employed for immunization.

A comparison of the scarlatinal streptococcus and *Staphylococcus aureus* shows numerous similar properties. The production of a toxin with a reasonable degree of cutaneous specificity is common to the two. The staphylococcus toxin is perhaps the less specific of the two. So far it has not been clearly differentiated from the leukocidin. Both bacteria may produce rashes during an infection, and these rashes may be blanched by specific antitoxic serums. Rashes, malaise and fever result from the injection of filtrates of either bacterium in children. Apparently the clinical pictures in certain types of infection with these cocci are almost identical.

One objection may be raised: Rashes are infrequent with staphylococcus infection, yet no other pyogenic bacterium is as widely distributed. This situation is not beyond explanation. *Streptococcus scarlatinae* may produce pyogenic infections without rash if the blood of the infected person contains antitoxin. We have examined the serum of eight normal persons and have found that all were capable of neutralizing the cutaneous reaction with toxic staphylococcus filtrates. The situation is probably comparable to that existing in scarlatinal infection, but the occurrence of staphylococcus antitoxin is apparently more universal than the occurrence of scarlatinal antitoxin in the blood of normal persons.

CONCLUSIONS

1. An exanthem may accompany *Staphylococcus aureus* infection. This exanthem is distinguished with difficulty from the rash occurring during infections with *Streptococcus scarlatinae*.

2. These cases may be distinguished by the absence of scarlatinal streptococcus, the presence of the staphylococcus, and positive blanching phenomena with staphylococcus antitoxic serum.

8. Trask, J. D.: The Amount of Scarlatinal Toxin in the Blood of Patients with Scarlet Fever, J. Clin. Investigation **3**: 391 (Dec.) 1926. Trask, J. D., and Blake, F. G.: Observations on the Presence of a Toxic Substance in the Blood and Urine of Patients with Scarlet Fever, J. Exper. Med. **40**: 381 (Sept.) 1924.

9. Stevens, F. A., and Dochez, A. R.: The Occurrence of Throat Infections with Streptococcus Scarlatinae Without a Rash, J. A. M. A. **86**: 1110 (April 10) 1926; The Epidemiology of Scarlatinal Throat Infections Sine Exanthemate, ibid. **87**: 2137 (Dec. 25) 1926. Nichols, E. E.: Infections with Streptococcus Scarlatinae in Persons with Scarlatinal Antitoxic Immunity, J. Clin. Investigation **3**: 411 (Dec.) 1926.

10. Von Lingelscheim, W.: Etiologie und Therapie der Staphylokokken, Beitr. z. exper. Therap. **1**: 49, 1899.

11. Neisser, M., in Kolle und Wassermann: Handbuch der pathogenen Mikroorganismen, ed. 2, Jena **4**: 375, 1912.

12. Parker, J. T.: The Production of Exotoxin by Certain Strains of Staphylococcus Aureus, J. Exper. Med. **40**: 761 (Dec.) 1924. Parker, J. T.; Hopkins, J. G., and Gunther, A.: Further Studies on the Production of Staphylococcus Aureus Toxin, Proc. Soc. Exper. Biol. & Med. **23**: 344 (Feb. 17) 1926. Parker, J. T., and Banzhaf, E. J.: The Production of Staphylococcus Antitoxin in Horses, J. Immunol. **13**: 25 (Jan.) 1927.

13. Coenen, H.: Die Serum Diagnostic der Staphylokokkenkrankungen, Beitr. z. klin. Chir. **60**: 402, 1908.

14. Gabritchevski, G. N.: Scarlatinal Vaccine and the Specificity of the Scarlatinal Streptococcus, Russk. Vrach. **10**: 469, 1906.

PSEUDO-EPITHELIOMATOUS HYPERPLASIA AT THE MARGINS OF CUTANEOUS ULCERS

WITH ESPECIAL REFERENCE TO HISTOLOGIC DIAGNOSIS *

CLEVELAND WHITE, M.D. †
Associate in Dermatology and Syphilology, University of Buffalo
BUFFALO
AND
FRED D. WEIDMAN, M.D.
Professor of Dermatological Research, University of Pennsylvania
PHILADELPHIA

That the histologic picture at the margins of chronic or subacute cutaneous ulcers often simulates or actually reproduces that of carcinoma cutis is common knowledge to the pathologist. This would especially apply to the more highly differentiated type of epithelioma, approximately grade 1 of Broders.[1] It is well known that there are many irritative factors which may lead to mimicry of malignant hyperplasia of the epidermis, such as cutaneous blastomycosis, bilharziasis of the rectum, Paget's eczematoid dermatitis, and around pellagrous dermatitis.[2] In all these, the histologic picture may at times be quite good for a malignant growth, but we learned long ago that a malignant condition microscopically was not necessarily a malignant condition clinically; i.e. not a matter of life and death to the patient. In some classes of cases it has thus developed that we have had to require in addition some of such clinical changes as recurrence, tissue permeation and destruction, metastases, anemia and cachexia before pronouncing them malignant.

However, it still remains that some of the hyperplasias in connection with the foregoing conditions finally amount to cancerous ones, and since the problem, the diagnosis of cancer, is vastly more important in its beginnings than in the advanced stages, it is incumbent on physicians in practice to anticipate the tragic late expressions just indicated and address themselves willy-nilly to the more uncertain histologic ones which they see in the earliest stages. Heretofore, as far as we can find, this problem in histologic diagnosis has been stated only as a generality. In this communication it will be analyzed more closely in detail, and an attempt will be made to establish quantitative standards for, or at least leads to, the establishment of a personal equation as to what level and other qualities of hyperplasia may be expected in subneoplastic epidermal hyperplasia.

This is an exacting, perhaps ambitious, program which can never, from the nature of vital processes, accomplish all its aims, and cannot pretend to supplant a ripe histologic experience. The acid test, that is, the clinical outcome, has been applied to each case in this series and is paramount to the situation.

This issue challenges interest from both pathologist and the clinician if for no other reason than that it involves treatment and prognosis vitally important to the patient; certainly, it falls especially in the province of the dermatologist to make the attempt to interpret the histology of skin ulcers as closely and severely as possible. To facilitate this, and to acquaint ourselves with appearances that may occur in this connection, it is proposed here to record not only the verbal descriptions but also pictorial representations of several steps of epidermal hyperplasia from obviously simple ones to equally obviously neoplastic ones.

The need for immediate attention to this situation was forced on us by sections from an ulcer on the leg of a boy, aged 15. He presented three traumatic ulcerations about 2 cm. in diameter on the left shin; they had refused to heal for three months, and factitial elements could not be detected which might have prevented normal epithelization. The histologic picture was regarded by us as that of prickle-cell cancer (fig. 4). Following wide surgical excision of the ulcers, the further histologic examination failed to confirm the biopsy diagnosis; clear-cut cancer could not be found in numerous sections from three large portions of material. From other cases which have come under observation and in which the ulcerations have healed or are healing under local symptomatic treatment, two have been selected in addition to illustrate the situation; since the histologic picture in all was more or less suggestive of malignant epithelial hyperplasia, they are used herewith as the basis for this paper. It must be understood that the considerations in this paper throughout apply only to the earliest stages of malignant conditions in borderline cases, not to those which have proceeded to disorganization of the corium and infiltration of subcutaneous parts.

HISTOLOGIC DIAGNOSIS

There are several well established criteria and principles which determine or at least help to differentiate histologically between neoplastic and non-neoplastic epidermal hyperplasia. Most important is the embryonic or vegetative character of the cell as seen in the hyperplastic parts—best in the deeper regions. Of course, this presupposes knowledge of the normal or adult type of cell, which may generally be acquired by comparisons with cells in more normal parts of the section. The embryonic character is manifested in several days. It is stated in the textbooks that the nucleus is large, hyperchromatic, and well chromatinized. (Hematoxylin and eosin stained sections are regarded as standard in this paper.) The cytoplasm has a rounded-off contour; its substance is more hyaloid than normal, and is perhaps more basic in tint or at least different in tint from the more normal cells elsewhere. There is an absence of vacuoles and edema and other evidences of normal metabolism such as may be exhibited in the more normal parts of the section. Levine [3] states that the type of cell that appears in human cancer is distinguished from other cells on the basis of size and normal cycle of karyokinetic division, the type of division being of the most aberrant character in cancer; this is true in advanced cases, but it is not certain that these extreme types are seen in the early stage with which this paper deals.

Another characteristic of the malignant acanthosis is, of course, deep permeation of the corium. But how deep? This cannot be answered categorically, but there are limitations to non-neoplasatic permeations. Thus, in some inflammatory dermatoses, such as eczema, in

* From the Laboratory of Dermatological Research, University of Pennsylvania, and the Department of Dermatology and Syphilology, University of Pennsylvania.

† In partial fulfilment of the requirements for the degree of Master of Medical Science, for graduate work in dermatology and syphilology, in the Graduate School of Medicine of the University of Pennsylvania.

1. Broders, A. C.: Squamous-Cell Epithelioma of the Skin, Ann. Surg. **73**: 141 (Feb.) 1921.

2. Lynch, K. M.: Epithelioma Developing in Pellagrous Dermatitis, J. Cancer Research **2**: 131 (April) 1917.

3. Levine, M.: Comparative Cytology of Animals and Plants, J. Cancer Research **9**: 11 (March) 1925.

which the interpapillary pegs may be highly hyperplastic, they may readily attain the level of the sweat glands, but we have never seen them reach more deeply than this. The presence of epidermal infiltrations between this level should strongly incline one toward the diagnosis of cancer.

Fig. 1 (case 2).—Grade 1 hyperplasia, such as may be seen in many chronic cases of dermatitis. This section came from the margin of the ulcer; the other margin of the same ulcer is seen in figure 4. The extreme irregularity in form of pegs, such as is seen in grades 2 and 3, is lacking.

Other associated adjuvant (but only adjuvant) histologic features of diagnostic importance are the intactness of the basement membrane and the formation of pearls. The basement membrane is a more or less definite line, histologically speaking, separating the basal layer of the epidermis from the underlying connective tissue stroma. Actually, it is more an intangible biologic barrier plane than an anatomic structure. Among the causes of vagueness of this plane are infiltration of various cells, edema, and the occurrence of regeneration, all of which may occur in eczema and other dermatoses, and particularly as seen immediately at the margins of benign ulcers. Mitotic figures per se are of little diagnostic value, for they are seen very frequently in simple inflammations and regenerations. They are useful only as adjuncts to other features previously mentioned. Pearls, likewise, are of value only when seen in conjunction with the first three features; thus, verrucae and verrucous nevi often contain pearls. In short, there is no magical open sesame to the diagnosis of epidermal cancer. The histologic diagnosis of cancer has to be arrived at through combination of the foregoing features. Deep permeation need not necessarily be an accompaniment, particularly in very early cancer. However, when there is basement membrane penetration in the genuine cancer sense the cells at that position are always embryonic. Ewing [4] puts it that no single microscopic feature and no combinations of occasional criteria can be claimed as invariably pathognomonic of the cancer process.

To recapitulate, the most valuable single factor in the histologic diagnosis of early skin cancer is also the most subtle one and the one requiring adequate histologic experience; i. e., the assuming of younger, more vegetative qualities on the part of the hyperplastic cells involved. Deep penetration, but only if sufficiently deep (such as infiltration between sweat coils), is a most valuable criterion. After this, mitoses, pearls and irregular interpapillary pegs take second rank.

GRADES OF PSEUDO-EPITHELIOMATOUS HYPERPLASIA

These grades of pseudo-epitheliomatous hyperplasia are artificial groups set up for convenience in discussion and in appraising the biologic activity of the parts. They will be best understood if the illustrations are referred to.

Grade 1. As a matter of fact, this grade scarcely merits the designation "pseudo-epitheliomatous" because there is no difficulty in excluding it from epithelioma; it is included in these considerations, however, in order to round out the series and supply a starting point for the hyperplastic changes. The picture is that of the well known acanthosis, such as is seen in eczema of high grade (fig. 1). The pegs may

Fig. 2 (case 1).—Grade 2 hyperplasia: Interpapillary pegs extremely irregular in form; but there is no subdivision into infiltrative strands.

reach almost to the sweat glands; the observer must be careful not to misinterpret the significance of certain islands of cells in the corium which are really tangential or transverse sections of projections from the pegs. The experienced eye will find that the embryonal qualities of cells which are seen in valid epithelioma are missing in this grade, and that there is not the slightest

4. Ewing, James: Neoplastic Diseases, ed. 2, Philadelphia, W. B. Saunders Company, 1922, p. 465.

suspicion that the basement membrane is broken. Mitotic figures may be abundant.

Grade 2. Features here are the same as in the foregoing group, but with additions. Thus, the basement membrane is so indefinite in places that it may even be regarded as broken. At such positions the cells may

Fig. 3 (case 3).—Grade 2 hyperplasia; similar to figure 2, but showing epithelial pearls in addition.

be of an embryonal character nearly or quite that of genuine epithelioma. There may be pearls. The interpapillary pegs may be excessively irregular in form. The features lacking for the unqualified diagnosis of epithelioma are, first, any extensive streaming of cells through a broken basement membrane, and, secondly, any notably deep extension.

Grade 3. Appearances here are quite those of epithelioma; by this it is meant that the only circumstances keeping such cases from the unqualified epitheliomatous cases are the clinical ones, such as absence of metastasis, or cachexia (fig. 4). Some cases of blastomycosis reproduce this picture of epithelioma, which explains the goodly number of blastomycosis cases mistakenly diagnosed as epithelioma.

REPORT OF CASES

Eight chronic cutaneous ulcerations supplied such radical pseudo-epitheliomatous appearance as to require more than passing examinations of the sections. No less than thirty sections were examined from each case; in some cases they were taken at so many different levels in the tissue block as to use it up entirely. It would be tiresome to repeat the histologic description in each case; hence only the grade of pseudo-epitheliomatous hyperplasia will be indicated as designated in the preceding section and in the illustrations; exception will be made, however, in those cases illustrated photomicrographically. It is emphasized that only those cases were included in this series in which complete healing was known to have finally taken place.

CASE 1.—J. D., a boy, aged 15, complained of ulcers over the shin, present for three months, following lacerations caused by falling against a table. Various home remedies had been applied, but the lacerations refused to heal; indeed, they were slowly enlarging.

When first examined by us there were three closely placed but definite ulcerations, each about 2 cm. in diameter, on one of the shins. The borders were subacutely inflamed, slightly indurated, hyperpigmented, and not undermined. In several places there was a pearly glint, like that of regenerating epithelium. There were numerous punctate pigmented scars in the immediate vicinity of the ulcers. Specific causation could not be established, and they were finally diagnosed as simple chronic traumatic ulcers. In view of the persistence and the suspicious pearly appearance, a biopsy was performed. Much to our surprise, its histology was that of prickle-cell carcinoma (confirmed by two pathologists, both of national reputation). According to the foregoing classification, it was a pseudo-epitheliomatous hyperplasia, grade 2 (fig. 2). The patient was presented before the Philadelphia Dermatological Society,[5] Feb. 8, 1926, in view of the early age at which the lesions occurred. Eventually, all three ulcers were excised widely, although they had healed somewhat under a soothing ointment. Numerous sections from all three portions of the surgical specimens did not show evidence of cancer,—at most there were only a few minute buds extending downward at the original biopsy site. Following skin grafting by the Thiersch method, the ulcers repeatedly healed and broke down, but eventually healed completely.

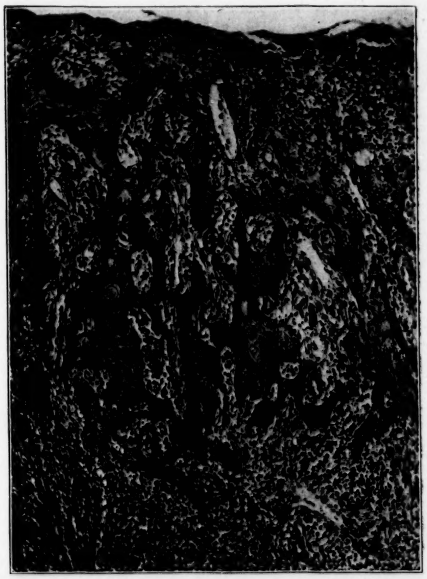


Fig. 4 (case 2).—Grade 3 hyperplasia; histologically perfect squamous-cell carcinoma.

CASE 2.—M. C., A school girl aged 17, born in Italy, exhibited an ulcer on the dorsum of the right forearm, near the wrist, of two years' duration. It partially healed each summer. The lesion was about 2 inches long and half an inch wide. It was superficially ulcerated, the borders were not indurated and

5. White, Cleveland: Prickle Cell Carcinoma in a Boy Aged Fifteen, abstr. Arch. Dermat. & Syph. **14**: 93 (July) 1926.

the base was heaped with crusted vegetations, while small droplets of pus exuded from the central portion. Adenopathy and constitutional symptoms were not present.

The patient was exhaustively studied in the hospital; cultures were made and guinea-pig inoculations were performed with the result that syphilis, tuberculosis and fungus infections were reasonably excluded as causative. Sections from biopsy showed the epithelial hyperplasia (fig. 4) of squamous-cell epithelioma (grade 3 of the classification). Tissue from a second biopsy, March 17, 1926, did not show epitheliomatous changes; the prickle cells were swollen and the corium was heavily infiltrated with round cells of all kinds, but there was no resemblance to any specific granulomatous process. When the patient was seen, May 7, 1926, the ulcer had healed, but the infiltration had not disappeared. A third biopsy was performed, but sections showed only an acanthosis and a heavy round-cell infiltration of the corium. Eventually, healing was complete.

CASE 3.—H. T., a colored man, aged 44, was first seen, Feb. 8, 1926, with an enlarged, swollen, ulcerated, painful tongue. The condition was of three months' duration and was progressive. He had syphilis—both as shown serologically and in sections from the tongue—but the arsenicals had little effect therapeutically. The first series of sections (from biopsy) showed epithelial hyperplasia of a degree to make one suspect

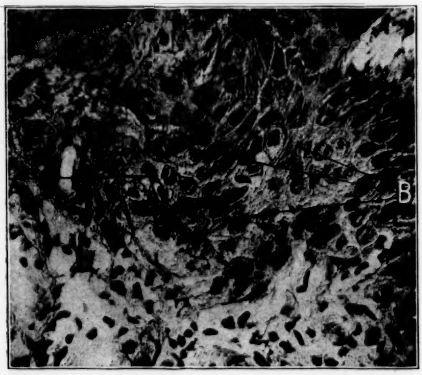


Fig. 5 (case 7).—Mitotic figures; grade 3 hyperplasia: *A*, one pair of cells which has just divided; *B*, three diasters.

cancer: grade 2 in the classification, (fig. 3). The anterior portion of the tongue was then removed surgically, and sections from its left half (site of the original biopsy) again showed definite cancer. The right half was examined in another laboratory, which could find only one small portion suggestive of a malignant condition. The stump of the tongue healed rapidly and there have not been any recurrences. The enlarged cervical glands receded after deep roentgen-ray therapy and radium. The patient has had a full course of antisyphilitic treatment, and within four months showed complete healing.

This was a case, presumably, of a gummatous tongue, with ulcerations, in which early cancer had secondarily developed, at least in the histologic sense, and possibly also in the fullest biologic one.

CASE 4.—J. E., a man, aged 41, had had "boils" on the neck for two years, a particularly large one having become much larger and carbuncular in the three weeks before examination. A portion of the border of the ulceration was taken at biopsy. Sections showed a degree of acanthosis compatible with a malignant process (grade 2 pseudo-epitheliomatous hyperplasia). Since the lesion did not improve under local applications, it was excised surgically. Healing was uneventful.

CASE 5.—J. M., a white man, aged 32, employed as a teamster, presented an elevated, round, soft, boggy vegetative ulceration about 4 cm. in diameter on the dorsum of the left forearm. It was of one week's duration, appearing at the site of a recent wound received from a broken glass cannula in the abdomen of a dead cat. Clinically, it was a deep kerion. Smear and culture showed *Trichophyton gypseum*.

Sections from the border of the lesion showed a high grade acanthosis (grade 2) and an underlying acute suppurative dermatitis. The lesion disappeared under local treatment for deep ringworm infection.

CASE 6.—M. B., colored, aged 50, with a clear cut case of syphilis, developed ulcers on the leg following trauma one year before presenting himself for treatment. They covered the lower third of the leg on its median parts. Under antisyphilitic treatment they healed in five months. Sections showed a grade 2 hyperplasia.

CASE 7.—A. D., aged 33, had had one leg amputated for Buerger's disease, and presented an old ulcer on the remaining ankle. Sections showed a grade 3 hyperplasia. Within five months it had healed under ultraviolet ray therapy.

CASE 8.—T. S., a girl, aged 18, entered the Buffalo City Hospital, Jan. 25, 1927, complaining of three ulcers on the right leg. They were very similar to those in case 2. The largest was about 4 cm. in diameter, and was of one and one-half years' duration. There was a flaccid paralysis of the same leg of fourteen years' duration, following an attack of anterior poliomyelitis. The only other pertinent physical observation was a slow pharyngeal reflex. Previous treatment had consisted of local applications of various types of ointments. Clinically, the ulcers were considered traumatic—in all probability factitial—but final proof could not be adduced. Mycotic examination was negative; the urine did not contain bromine or iodine, and bacteriologic study yielded only a culture of *Staphylococcus hemolyticus*. There was a 4 per cent eosinophilia in the blood. In view of the long persistence, a biopsy was taken which included the borders of two ulcers. The histologic appearance was that of grade 3 hyperplasia and compatible with beginning prickle-cell epithelioma (confirmed by a pathologist of wide experience). In view of the negative clinical and other conditions, together with our experience in previously recorded cases, only local treatment was instituted. Wet boric acid dressings were applied for two weeks to combat the slight pyogenic infection, and then fixed applications were used. March 22, 1927, all the ulcers were completely healed and the patient was discharged.

SUMMARY AND CONCLUSIONS

Whereas it has always been recognized that epidermal hyperplasia may take place at the margins of cutaneous ulcers, the extent to which it may develop histologically does not appear to have been emphasized or evaluated heretofore.

The foregoing studies show that every gradation of hyperplasia occurs among such ulcers, even to those which mimic early epithelioma perfectly, as expressed histologically.

At some of the early stages, and even when definitely developed, it may be impossible to distinguish squamous-cell cancer histologically from nonmalignant hyperplasia; there are thus definite limitations to the recognition of earliest cancer which are most unfortunate because they are so important to the patient.

We believe that the diagnosis of carcinoma under these circumstances is unjustified except when the infiltration extends to the level of the sweat glands or farther, and when the pathologist has had extended acquaintance with the behavior of hyperplastic epiderm in general. It is felt that numerous cases diagnosed in the past as beginning carcinoma at the margins of ulcers have been only exaggerated regenerative hyperplasias, and that unnecessarily radical treatment has been inflicted on patients, as in breast cases which McFarland has shown to be only senile or abnormal involution.

The premises on which cancerous changes at the margins of such ulcers have been postulated in the past deserve reexamination in this new light; i. e., whether on a histologic basis alone or supported by supplementary clinical features.

PULMONARY TUBERCULOSIS

SOME INTERESTING CASES

S. W. SCHAEFER, M.D.
COLORADO SPRINGS, COLO.

With the more general use of the roentgen ray during the treatment of cases of pulmonary tuberculosis, especially when serial pictures are taken at intervals of three, six or twelve months, our knowledge and understanding of the process of healing, as well as of destruction in tuberculous disease of the lungs, has been greatly increased. This study has shown us many interesting things, probably among the most important being the fact that tuberculous lesions heal not only by fibrosis with a subsequent permanent scar, but also and very frequently by absorption of the tuberculous deposit without any or only very slight scar tissue

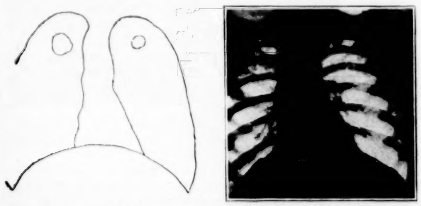


Fig. 1 (case 1).—Marked exudative type of lesion like snow over both lungs; a cavity in each apex.

formation. It is of interest to know that this fact of the absorption of tuberculous lesions without the formation of scar tissue has been beautifully demonstrated experimentally by Leroy S. Gardner of Saranac Lake. The healing, the formation and the behavior of cavities are also of great interest as the various changes are observed and the results of the physical examination confirmed. Both the absorption of exudate and the gradual diminution in size of cavities are beautifully shown in the roentgenograms in case 1.

REPORT OF CASES

CASE 1.—F. S., a machinist, aged 30, from Detroit, first came to the free clinic, Feb. 6, 1924, after having been in the city for three weeks. He gave a history of having been ill for two years, so that he had been unable to work; he had steadily grown worse, although under medical care, and had just about used up all his savings, having $35 left on coming to the clinic. A physical examination showed a far advanced case, with marked involvement of both lungs and cavity formation at both apexes. The roentgenograms (fig. 1) confirmed the physical examination, showing an exudative type of lesion quite evenly distributed over both lungs, with a large cavity at the right apex and a smaller one at the left, but both with rather poorly defined walls. This plate suggests a snow storm falling over both lungs; the lesion is a very acute type and shows little tendency toward healing or scar tissue formation. As I understand him, this is the type of lesion that Dr. Kennon Dunham says does not heal in the East but does, sometimes, in Colorado. This patient was so ill, and the prognosis seemed so bad, especially with his very limited financial resources, that we advised him to return to his home town and enter the municipal sanatorium there. This he absolutely refused to do, saying that he had become worse there while now, although here only three weeks, he was already getting better. We communicated with the charities in his city, who acknowledged their responsibility and stated that they would take care of him if he returned there, as they had their own municipal sanatorium, but could not help him in Colorado. He again refused to return, so the local Associated Charities agreed to look after him for a

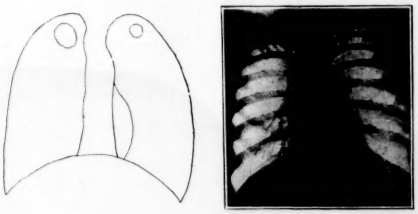


Fig. 2 (case 1).—Film taken one year later, showing remarkable disappearance of exudation, and denser scar formation around cavities.

short while. He was put at absolute rest in a cheap, but adequate, boarding house, and was an excellent patient. After two months he had lost his fever, and had gained 10 pounds (4.5 Kg.). This improvement continued steadily; he has gained 30 pounds (13.6 Kg.) and is able to do light work and support himself while he gets strong enough for hard work. A film (fig. 2), taken one year after the first one, Feb. 17, 1925, shows a remarkable clearing of the exudative process in both lungs, although the cavities with their more distinct wall from more adequate scar tissue formation stand out more prominently. Another film (fig. 3) taken, Oct. 9, 1925, shows that the absorption of the infiltration has continued, leaving not scar tissue but good lung parenchyma over the greater part of both lungs, and that both cavities were only about half the size they were six months before. The pathologic physical signs had entirely disappeared except at the apexes, where a few râles could still be heard on the right side; the patient had no cough or expectoration. In this case our high, dry, sunshiny climate must deserve some of the

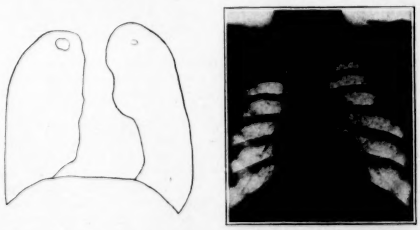


Fig. 3 (case 1).—Film taken eight months later, showing almost complete absorption of exudative process; both cavities are only about half the size they were in the previous film.

credit for this "cure," for the patient had been doing the same thing under similar conditions in a low, damp climate, and had become progressively worse.

Another case is of interest as showing both the healing and the destructive processes in a far advanced condition:

CASE 2.—A. S., a girl, single, aged 21, a schoolteacher from New York, seen in 1919, had a moderately advanced case of tuberculosis. On account of financial difficulties, she had to

go to work in the spring of 1920 before she was well. She returned in the fall quite ill, and remained in bed during the winter and spring, 1920-1921, gradually getting worse, so that by summer she was acutely ill, with a daily afternoon rise of temperature to 103 F., an almost incessant cough, and 8 ounces of foul sputum (Gaffky 8). Physical examination

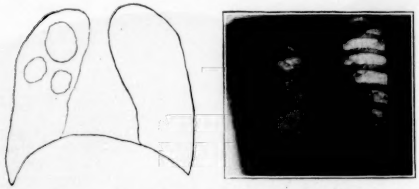


Fig. 4 (case 2).—Extensive parenchymatous infiltration in both lungs, more marked in the right, where there is also cavity formation, as shown in the diagram.

revealed numerous, very moist, indeterminate râles over both lungs, with cavity formation on the right. Roentgen-ray examination (fig. 4), July 9, 1921, showed extensive parenchymatous infiltration in both lungs, more marked in the right, where there were also cavities. The induction of artificial pneumothorax on the right side had been considered, but after seeing the roentgenograms and the amount of infiltration in the left base, it seemed unwise, even though a portion of this apparent infiltration was, of course, due to the breast shadow. However, the patient was so ill and so uncomfortable that she insisted on trying the artificial pneumothorax. A week later, July 16, another roentgen-ray film (fig. 5) was made to see if it was possible to get a better picture of the left base; this was obtained and at the same time it was found that in the lapse of a week a tuberculous pneumonia was beginning

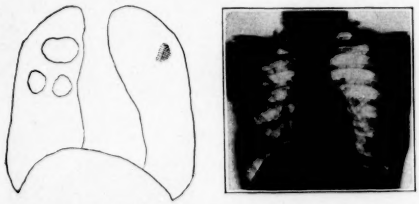


Fig. 5 (case 2).—One week later: There is a small area of tuberculous pneumonia in the second left interspace, which was not present in the preceding film.

in the second left interspace, just under the point where the shadow of the second rib joins the shadow of the scapula. This again made us hesitate about compressing the right lung; but the patient's condition was so critical, she was so miserable, and a fatal outcome seemed so likely unless something was done that the risk and the chances were carefully explained to her, and, not only with her consent, but at her urgent request, artificial pneumothorax was successfully induced a few days later. The compression was very slowly and carefully done, and the result was most astonishing. Almost immediately the patient lost her incessant cough and profuse expectoration, and the temperature very quickly fell below 100. In certain cases like this one, when artificial pneumothorax is successfully performed, it is one of the most remarkable miracles of modern medicine, converting a hopeless, practically moribund patient into a comfortable, cheerful convalescent in the course of a few days. This was, of course, not an ideal case for artificial pneumothorax; we were simply taking a desperate chance in the hope that if the body were freed from the absorption of poison from a massive lesion in one lung, it might be able to take care of a smaller lesion in the better lung.

The patient's improvement continued, and she was kept in bed for several months, although her temperature was only rarely above normal, never rising higher than 99.2 F. and that only just before her menstrual periods. Another roentgen-ray examination (fig. 6), thirteen months later (Aug. 14, 1922), showed a very good collapse of the right lung, but with one cavity still held open by stringlike adhesions going from the apex of the compressed lung to the apex of the chest wall. The left lung was apparently healing; although râles could still be heard, they were much less numerous and much less moist. Another roentgen-ray examination a year later (Aug. 13, 1923, fig. 7) showed a still better compression with the cavity almost completely closed, and the left lung apparently healed except for a small spot in the third interspace.

During the summer and fall of 1922, the entire year of 1923, and the spring and summer of 1924, the patient led a practically normal life, and did a considerable amount of tutoring. In the fall of 1924 she did not seem quite so well, and a few râles and roughened breathing could be heard in the left interscapular space. She was advised to stop her work and rest much more, and at the same time the intervals

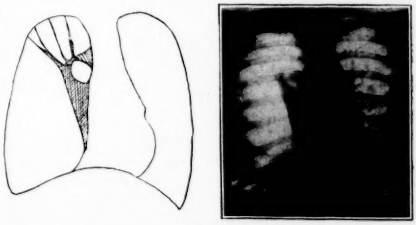


Fig. 6 (case 2).—Thirteen months later: good collapse of right lung, but one cavity held open by adhesions going to chest wall; disappearance of area of pneumonia and general improvement in left lung.

between the pneumothorax treatments were lengthened. Less air was introduced in an attempt to have the right lung reexpand so that the left might be compressed, but without success.

In November, 1924, fifteen months after the last roentgenogram was taken, another roentgen-ray examination was made (fig. 8), which showed a definite increase in the size and density of the area of infiltration in the third and fourth interspace, and also that the cavity in the compressed right lung had entirely closed. During the winter and spring of 1925, the patient kept comparatively quiet and felt well except for occasional attacks of what she called "bronchitis," when her cough became quite troublesome. During the summer she

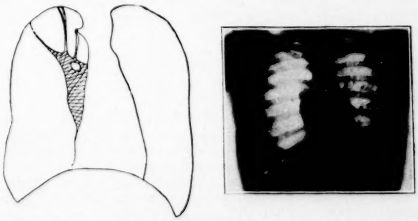


Fig. 7 (case 2).—Film taken twelve months after preceding one: better compression of right lung; great improvement in left lung except for small area of infiltration at third left interspace.

was fairly well, but in September she had a serious upset with high fever and much cough, from which, however, she recovered rather quickly. She remained in bed, and Dec. 3, 1925, another roentgen-ray examination was made (fig. 9), which showed a large cavity deep in the left lung where the area of marked infiltration had been in the previous plate. Two weeks

later she had a tremendous hemorrhage, followed by a lobar pneumonia, and died four days later. The advisability of the induction of artificial pneumothorax in this case may be open to question, but without it she would probably have died in 1921; with it, she had four and one-half years of a very happy life.

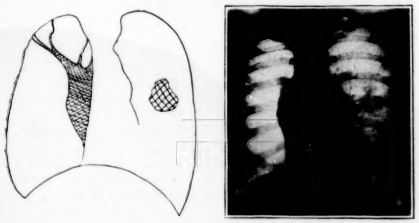


Fig. 8 (case 2).—Film taken fifteen months after the preceding one: cavity in right lung completely closed, but increase in size and density of area of infiltration in third and fourth left interspaces.

Another patient presented an interesting cavity, which again shows what remarkable results can sometimes be obtained with artificial pneumothorax even though it is not used in the orthodox manner; i. e., given only when there is one good lung:

CASE 3.—A. W., a married woman, aged 25, had come out from Chicago in 1922 with a far advanced case of tuberculosis. There was involvement of both lungs, with a cavity at the right apex, and of the larynx (fig. 10). Under the routine rest and climatic treatment, with "silence" and a few local

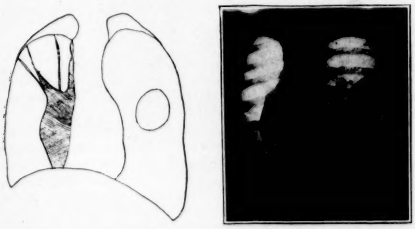


Fig. 9 (case 2).—Film taken thirteen months later: large cavity where area of infiltration was shown in previous film.

treatments, her throat trouble healed and the right lung improved slowly. During the winter of 1923-1924, following an attack of influenza, the patient became worse and in the spring was critically ill, with high fever, almost continuous cough, and much expectoration; she was losing weight rapidly, felt extremely ill, and became dyspneic on the slightest movement, such as turning over in bed. Chest examination at this time showed that the right lung was still in fairly good condition, but that over the entire left lung there was marked impairment of the percussion note; the breath sounds were very soft and distant but were accompanied both on inspiration and on expiration by numerous subcrepitant râles suggesting a tuberculous pneumonia. A roentgen-ray examination, Feb. 25, 1924, confirmed these observations, figure 11 showing marked parenchymatous infiltration over a large portion of the left lung, and a medium sized cavity with a distinct wall at the right apex. Again, this patient was so ill that it seemed as though she would live only a short while unless something drastic was done. Therefore, in spite of the cavity on the right side, it was decided to attempt to collapse the left lung. This was successfully done, with her understanding and consent, in April, 1924. Once more there was almost immediately a remarkable improvement, although in this case the lung had to be collapsed with extreme care and very slowly on account of the great dyspnea present. Another picture, taken, December 30 (fig. 12), showed a very good collapse of the left lung, as well as the almost complete disappearance of the cavity at the right apex. This is the first and only time I have ever seen apparent closure of a cavity from pressure of an artificial pneumothorax on the opposite side. During this time the patient's improvement has continued, although she still has a premenstrual rise of temperature to 99 or 99.2 and she is able to be about more and more all the time. For a while, for two or three days after each refill, she would become very dyspneic, so that we have given less air and have kept a negative pressure to avoid this. The sputum has diminished from 10 or 12 ounces in twenty-four hours in 1924 to 1 or 2 ounces; and her weight has increased from 108 pounds (49 Kg.) in May, 1924, to 146 pounds (66 Kg.) at the present time. Another film (fig. 13), taken, Feb. 6, 1926, shows that with the reduced pressure, the left lung has slightly expanded so that the cavity at the right apex can again be seen, but is much smaller than before the induction of the pneumothorax.

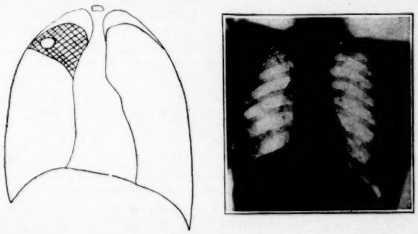


Fig. 10 (case 3).—Marked lesion with cavity formation at right apex; left lung in fair condition.

The entire right lung seems in very good condition, while the left lung shows marked absorption of the exudate, leaving good lung parenchyma with only here and there a small scar from a healed tubercle. We are again raising the pressure in the pneumothorax cavity in an attempt to reclose the cavity on the right side. The patient has not had tubercle bacilli in her sputum for the last ten months.

COMMENT

The ability to free the sputum from tubercle bacilli seems to have a definite bearing on the ultimate prognosis. In cases 1 and 3 the bacilli disappeared comparatively quickly, while in case 2, even though for

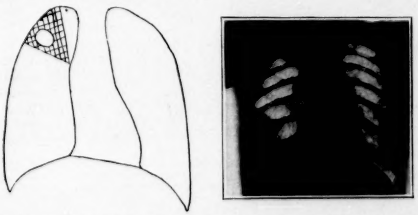


Fig. 11 (case 3).—Film taken eighteen months after preceding one; marked parenchymatous infiltration over left lung; cavity still present at right apex.

months at a time the patient had less than half a teaspoonful of sputum in the twenty-four hours, this was always positive for tubercle bacilli when examined.

All these were far advanced cases, and the patients were kept at absolute rest for months. By absolute rest is meant rest in bed, plus the use of postural rest

when indicated and the use of shot bags over the apexes when artificial pneumothorax is not given, especial attention being paid to the amount of talking a patient is allowed to do. In all three cases during the acute upsets, the patients were put on "silence," often for several weeks at a time. It is only by using rest to the nth degree that the absorption of these massive exudates can be obtained.

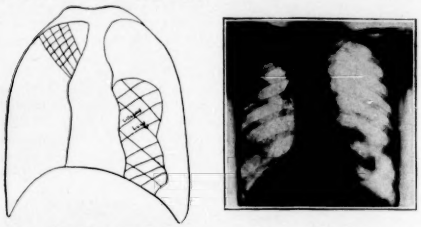


Fig. 12 (case 3).—Film taken ten months after preceding one; good collapse of left lung, with disappearance of cavity at right apex.

SUMMARY

Some of the facts brought out by this group of cases and films might be thus summarized:

1. Tuberculous lesions in the lungs do heal by absorption of infiltrations as well as by scar tissue formation.

2. Tuberculous cavities in the lung do become very much smaller with improvement, and in some cases they apparently entirely disappear as far as the physical observations and the roentgen-ray examination can show.

3. Artificial pneumothorax is often of great aid even in cases of pronounced bilateral tuberculous disease. If the body is relieved of the tremendous poisoning from a massive lesion in one lung, it may be able to cope successfully with a smaller lesion in the other.

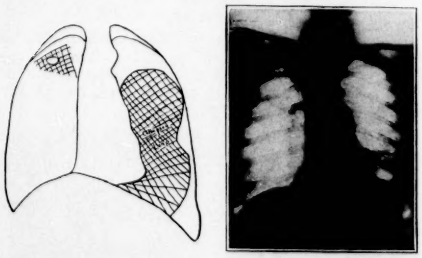


Fig. 13 (case 3).—Film taken thirteen months after preceding one: The left lung has been allowed to reexpand slightly, and the cavity at the right apex can again be seen, though very much smaller.

4. Most tuberculous patients are apparently helped by a high, dry, sunny climate such as that in Colorado, and in some cases such a climate may be the deciding factor in the recovery of the patient.

Exchange National Bank Building.

The Duty of Our Schools.—Children in schools must be allowed freedom to develop active qualities of initiative, independence and resourcefulness, before the abuses and failures of democracy will disappear.—Dewey.

Clinical Notes, Suggestions and New Instruments

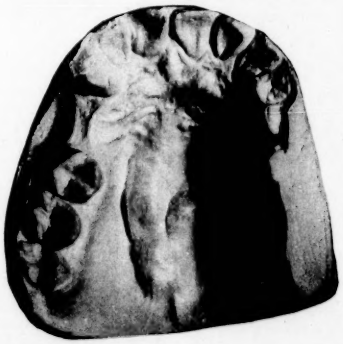
TORUS PALATINUS

JOHN E. LANE, M.D., NEW HAVEN, CONN.

In 1909, Godlee[1] began an article on torus palatinus as follows:

> In May of last year Dr. Morriston Davis brought to me a lady, aged 58, . . . on account of a small projection obviously of bone, terminating posteriorly a median ridge in the hard palate. . . . Up to that time I had never heard of the torus palatinus and, surgeon-like, I suggested the removal of the supposed exostosis. But my ardor was damped by the deaf husband mistaking my suggestion that it was congenital, for one that it was hereditary, and stating in confirmation that her daughters had the same peculiarity. . . . Naturally, I made inquiries among the dentists, and it at once became clear that to some of them the swelling was familiar.

It is quite likely that physicians who are familiar with this not uncommon anomaly have had an experience similar to Godlee's. Several patients have been referred to me for diagnosis of the condition, and, though I recognized it for what it is, such books as I consulted for information about it did



Large torus palatinus.

not mention it. Some time ago, when I was demonstrating a rather marked example of it, the name was supplied for me by Dr. George Blumer.

The torus palatinus is thus described by Merkels:

> The suture which unites the two halves of the hard palate in the midline sometimes shows so markedly raised bony borders, that, even in the living subject, a thick and broad elevation may be felt and seen. This fact was noticed many years ago. Chassaignac believed it to be a syphilitic exostosis. Kupffer and Bessel-Hagen thought it to be a peculiarity of East Prussian skulls. Neither view is correct. We must rather look upon the protuberance as an anomaly which in the first place is entirely harmless and which may appear occasionally in any locality.

After quoting this description, Korner[2] says:

> If we add to these words of Merkel that the protuberance just described, the torus palatinus, is in many families inherited (Carabelli), we have said everything that is now known about it.

A considerable number of examples of the condition have been observed, described in detail, and tabulated. However, this brief description is sufficient to identify the condition, which, if known to exist, is unlikely to be confused with anything else.

The patients who have been referred to me had been sent because their physicians had suspected the possibility of the protuberance being either sarcoma or syphilitic periostitis or gumma.

1. Godlee, R. J.: The Torus Palatinus, Brit. J. Dent. Sc. **52**: 721, 1909.
2. Korner, O.: Der Torus palatinus, Ztschr. f. Ohrenh. **61**: 24, 1910.

I am calling attention to the condition because it is not mentioned in most of the books on diseases of the mouth or in most other textbooks, and because, though it is frequently recognized by physicians and dentists, its name, as far as I can ascertain, is known to few of either profession.

The accompanying illustration is an example of a rather large torus palatinus. Martens,[3] Moral and Friboes[4] and Stieda[5] give detailed descriptions and additional references.

59 College Street.

A CASE OF DIPHTHERIA PROBABLY ACQUIRED BY LABORATORY INOCULATION*

RUTH E. TAYLOR, M.D., CHICAGO

Accidental diphtheria infections in laboratories are infrequent. Mallory[1] reported an infection contracted by a student who cut his finger while removing the organs of the neck at an autopsy. Baldwin, McCallum and Doull[2] reported a case in which a physician had pricked his finger with a contaminated needle while carrying out a virulence test. Hammerschmidt[3] reported a similar infection. Riesman[4] reported an infection contracted by a bacteriologist who aspirated virulent organisms while transplanting cultures. In the cases reported, symptoms appeared within from twenty-four to forty-eight hours. The following case would appear to be one of accidental infection as the patient, a woman, aged 54, had been transferring virulent diphtheria cultures forty-eight hours before the onset of illness, and no other source of infection was known.

REPORT OF CASE

The first symptom, a mild sore throat, was noticed late in the afternoon; the following morning the patient was admitted to the hospital acutely ill and apparently very toxic. The throat was intensely swollen, and the tonsils, soft palate and uvula were covered with membrane. The posterior wall of the pharynx could not be seen. Breathing through the nose was difficult because of edema of the tissues, but a membrane could not be seen. Edema of the neck was intense, extending to the midline and well down over the clavicles. The pulse was 112; the temperature, 101.4, and the respiration, 24. The patient was given 20,000 units of antitoxin intravenously and 40,000 units intramuscularly, after three desensitizing doses of serum had been given. Six hours later edema was perceptibly increased, and she was given another 20,000 units intravenously. Twenty-four hours later the edema was decreasing slightly, and the membrane was thickened at the edges. Another dose of 20,000 units was given intramuscularly. Cultures from both nose and throat contained Klebs-Loeffler bacilli. On admission, the urine did not contain abnormal constituents. On the third and fourth days of illness, a trace of serum albumin and a few casts were present. Recovery, for five weeks, was gradual and uneventful, except for an urticarial serum reaction of three days' duration which occurred ten days after the first injection of antitoxin. On the twenty-third day after admission the patient was able to be up and about, and was taken to her home. About two weeks later, weakness of the soft palate was noticed. This was followed by partial paralysis of the pharynx and of all the skeletal muscles. A paralysis of the eye muscles was not noticed. Sensory disturbances included numbness of the hands and feet and difficult equilibration. Eight weeks after the onset of the paralysis all symptoms had disappeared, excepting numbness of the fingers and toes. Cardiac disturbance was not detected at any time during the course of the illness.

SUMMARY

The case described, which was, in all probability, one of accidental laboratory infection, is unusual in that the membrane was extensive and the toxemia severe in less than twenty-four hours after the first symptoms were noticed, and that extensive paralysis occurred, although a large dose of antitoxin had been given within twenty-four hours of the onset of illness.

3. Martens, H. T.: Der torus palatinus als Rassenmerkmal, Rostock, 1911; abstr. by author, Ztschr. f. Ohrenh. **63**: 153, 1911.
4. Moral and Friboes: Atlas der Mundkrankheiten, Leipzig, Vogel, 1924, Tafel 21, fig. 80.
5. Stieda, Ludwig: Der Gaumenwulst (Torus palatinus) Ein Beitrag zur Anatomie des knöchernen Gaumens, Virchow's Festschrift **1**: 145, 1891.

* From the John McCormick Institute for Infectious Diseases.

1. Mallory, cited by Nuttall and Smith, Bacteriology of Diphtheria, 1913.
2. Baldwin, A. H.; McCallum, Frank; and Doull, J. A.: A Case of Pharyngeal Diphtheria Probably Due to Auto-Infection from a Diphtheria Lesion of the Thumb, J. A. M. A. **80**: 1375 (May 12) 1923.
3. Hammerschmidt, J.: Accidental Infection with Diphtheria, München med. Wchnschr. **71**: 1755 (Dec. 12) 1924; abstr. J. A. M. A. **84**: 408 (Jan. 31) 1925.
4. Riesman: Two Cases of Diphtheria, One from Laboratory Infection and One in an Infant Eleven Days Old, Philadelphia M. J., 1898, pp. 423-426.

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED AS CONFORMING TO THE RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR ADMISSION TO NEW AND NONOFFICIAL REMEDIES. A COPY OF THE RULES ON WHICH THE COUNCIL BASES ITS ACTION WILL BE SENT ON APPLICATION. W. A. PUCKNER, SECRETARY.

ETHYLENE FOR ANESTHESIA (See New and Nonofficial Remedies, 1927, p. 50).

Ethylene-C. L. P.—A brand of ethylene for anesthesia-N. N. R.

Manufactured by the U. S. Industrial Chemical Co., New York (Certified Laboratory Products, Glendale, Calif., distributor). No U. S. patent or trademark.

PROTEIN EXTRACTS DIAGNOSTIC-P. D. & CO. (See New and Nonofficial Remedies, 1927, p. 40).

The following products have been accepted:

Alfalfa Pollen Protein Extract Diagnostic-P. D. & Co.‡ *Bean (Kidney) Protein Extract Diagnostic-P. D. & Co.**

Prepared by the method given in New and Nonofficial Remedies, 1927, p. 40.

TYPHOID VACCINE (See New and Nonofficial Remedies, 1927, p. 365).

Parke, Davis & Company, Detroit.

Typhoid Vaccine (Prophylactic).—(See New and Nonofficial Remedies, 1927, p. 369). Also marketed in packages of one 20 cc. vial (Bio. 431) containing 1,000 million killed typhoid bacilli per cubic centimeter.

Typhoid-Paratyphoid Vaccine (Prophylactic).—(See New and Nonofficial Remedies, 1927, p. 369). Also marketed in packages of one 20 cc. vial (Bio. 446) containing 1,000 million killed typhoid bacilli and 750 million each of killed paratyphoid bacilli A and B per cubic centimeter.

HORLICK'S MALTOSE-DEXTRIN MILK MODIFIER.—A mixture containing approximately: maltose, 63 per cent; dextrin, 19.5 per cent; protein, 11.5 per cent; fat, 1.4 per cent; moisture, 2 per cent, and ash, 2.6 per cent.

Actions and Uses.—On the claim that maltose is more readily assimilable than other forms of sugar, Horlick's maltose-dextrin milk modifier is proposed to supplement the carbohydrate of cow's milk.

Dosage.—Horlick's maltose-dextrin milk modifier may be used in amounts to meet the requirements of a desired feeding schedule.

Manufactured by Horlick's Malted Milk Corporation, Racine, Wis. No U. S. patent or trademark.

Horlick's maltose-dextrin milk modifier is prepared by the action of diastase on wheat flour in the presence of water. The extraction is brought to dryness under a high vacuum. Approximately 2 per cent of potassium bicarbonate is added in the manufacture of the product; about 0.66 per cent while the product is in the liquid extractive state, and about 1.34 per cent after the product has been dried.

Horlick's maltose-dextrin milk modifier is an ivory colored or cream white powder, having a sweet taste. It is soluble in water or milk and is slightly hygroscopic. When in an aqueous solution (1 in 20) it is neutral or slightly alkaline to phenolphthalein and is alkaline to methyl orange.

Add a few drops of solution of iodine to an aqueous solution of Horlick's maltose-dextrin milk modifier (1 in 10): no blue color is produced (*absence of starch*).

Determine the maltose content of Horlick's maltose-dextrin milk modifier gravimetrically by the Munson & Walker method. Determine the fat content by extraction in an extraction tube, using the neutral Roese-Gottlelb method; evaporate the extraction and weigh the residue. Determine the protein content by calculation from the nitrogen content as found by the Kjeldahl-Gunning-Arnold method.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

535 NORTH DEARBORN STREET - - - CHICAGO, ILL.

Cable Address - - - - "Medic, Chicago"

Subscription price - - - - - - Five dollars per annum in advance

Please send in promptly notice of change of address, giving both old and new; always state whether the change is temporary or permanent. Such notice should mention all journals received from this office. Important information regarding contributions will be found on second advertising page following reading matter.

SATURDAY, JUNE 18, 1927

THE ADJUSTMENT TO VARYING ATMOSPHERIC CONDITIONS

Man is exposed to marked variations in his atmospheric environment through seasonal changes such as occur naturally in the temperate zones or through changing elevation in a tropical climate. These undoubtedly have some effect on his health and efficiency, and temperature and humidity have come to be regarded as the most influential factors associated with the atmospheric conditions. Man's atmospheric environment may be further altered, however within doors through influences brought about by artificial conditions of living and working, whether in the home or in the industries. There are numerous occupations involving exposure to extremes of heat and cold, dampness and sudden changes. Out of several hundreds of such industrial conditions that have been listed,[1] the following will serve to illustrate the diversity of fields in which the problems of abnormal atmospheric working conditions are likely to present themselves: makers of artificial ice, caisson workers, coke-oven workers, cold-storage plant workers, furnace workers, glass makers, hothouse workers, laundry workers, dye makers, foundry workers, miners, pottery workers, sailors, telephone linemen, and welders.

Students of hygiene are essentially in agreement that the menace of "bad air" does not consist in carbon dioxide, a natural product of expiration, or in some subtle organic poison such as was once assumed to occur. Accordingly, nearly twenty-five years ago a writer[2] emphasized the fact that a "breath poison" does not exist, that the carbon dioxide content of the air is not a correct measure of the necessity for ventilation, that injury to health proceeds from excessive heat and humidity, and that the cooling and drying power of the atmosphere is of more value than the control of impurities or of gases like carbon dioxide. It should be noted, however, that with the advent and ubiquitousness of the automobile the occasional dangers of the resulting carbon monoxide and other exhaust gases need at least to be kept in mind in discussions of modern atmospheric conditions.

Interest in the methods of combating unfavorable atmospheric conditions has been stimulated by the growing recognition of the economic advantages that result from work carried out under the most satisfactory conditions of personal activity. The benefits of proper heating and cooling and suitable ventilation can sometimes be expressed in dollars and cents as well as in terms of physiologic well being. Consequently, efforts to secure appropriate atmospheric environments have been initiated in many quarters. The science of hygiene thus has acquired the imperative duty of giving careful consideration to all that is involved in securing the most satisfactory atmospheric conditions. Experts of the United States Public Health Service[3] have pointed out that the effects on the human body of abnormal air temperatures are modified by humidity, air motion, exercise, physical condition of persons exposed, food eaten, clothing worn, and idiosyncrasy. Humidity increases the discomfort and ill effects of both high and low temperature. It has been concluded that there must necessarily exist certain combinations of temperatures, humidities and air motion that will produce the same total body heat loss by radiation, convection and evaporation, and therefore the same feeling of comfort or discomfort. Any such combinations are equivalent and have been described as "effective temperatures." Comfort, as determined by both sense and physiologic reactions, is stated to depend solely on "effective temperature."

It will perhaps be more surprising to learn from the government report that the limiting physiologic reaction caused by high temperatures, as determined by comfort, is not body temperature but the pulse rate. When this is above 135, the first symptoms of discomfort arise; when above 160, the effects range from severe to distressing. The upper limit in atmospheric conditions at which work can be performed efficiently corresponds to a dry-bulb temperature of 100 F. and a relative humidity of 30 per cent, or 90 to 95 F. in still saturated air, even when the subject is stripped to the waist. The optimal temperature at rest is around 66 F.; and with hard work the optimal temperature is 59.5; 43 F. was pronounced as too cold with or without air movement, regardless of humidity. In still air, no temperature is too low to prevent outdoor work.

The problem of human adaptation to certain tropical climates has been discussed repeatedly, and recently in connection with the "White Australia" policy.[4] Now

1. Robertson, D. G.: An Index to Health Hazards in Industry, Service Publication 22, Department of Health, Australia, 1922, pp. 31-32.

2. Mehl, W.: Kohlensäuremassstab; Atemgift; Entwärmungsmassstab; zugleich ein Beitrag zur Sicherung hygienischer Forderungen an die Luft und die Wärme dicht besetzter Räume, Gesundheit, Leipzig, **28**: 33, 73, 103, 1903.

3. Sayers, R. R., and Davenport, Sara J.: Review of Literature on the Physiological Effects of Abnormal Temperatures and Humidities, Pub. Health Rep. **42**: 933 (April 8) 1927, which has furnished much of the information for the discussion above.

4. Sundstroem, E. S.: Contributions to Tropical Physiology with Special Reference to the Adaptation of the White Man to the Climate of North Queensland, Univ. of California Publications in Physiology **6**: 1, 1926.

that diseases of exogenous origin can be better controlled and averted, and that the principles of proper diet are better understood, the possible deleterious effects of climate per se demand special consideration. According to Sundstroem,[4] decrease in cooling power in the more humid parts of the tropics constitutes the principal physiologic menace to the welfare of the white races in such regions. He believes that the body is capable of setting in motion a chain of adaptive mechanisms that help to adjust threatening disproportions between heat production and heat dissipation. A lowering of basal metabolism probably constitutes one such reaction. Whether this implies a lowered "vitality" may be debated. Sundstroem asserts that some relief may ensue to the organism if it succeeds on the one hand in keeping down the total sum of active protoplasm and, on the other hand, in enlarging the relative area of skin surface. He states that evidence has been produced to indicate the existence of both these mechanisms at least in animals. Man possesses, in his perspiring integument, an effective heat dissipating organ, and we assume that his power of adaptation to a tropical climate is more or less proportional to the efficiency of his sweat glands. But, Sundstroem concludes, it is conceivable that in consequence of this profuse perspiration the burden and the risk of breakdown will only be shifted from the regulation of heat to that of water. Tropical climate seems to tend to establish a new level of equilibrium between the organism and its environment. In relation to this process the mobilization of water in the body may deserve more intensive study than it has received.

ERGOSTEROL, A PRECURSOR OF THE ANTIRACHITIC VITAMIN

Not long after the discovery that exposure of various types of foods to ultraviolet rays will endow them with antirachitic potencies, the "receptive" substance capable of becoming thus activated appeared to have been found. Independently, but at about the same time, it was ascertained by three groups of biochemists [1] that the higher alcohol cholesterol, having the characteristics then known of the pure substance, was rendered antirachitic by exposure to ultraviolet rays. Meanwhile, as was recently pointed out,[2] the earlier expressed suspicion that an impurity in the usually available samples of cholesterol may be the responsible factor concerned in the activation by ultraviolet rays has gained in importance. On the one hand, the evidence is increasing that cholesterol that is highly purified by chemical means loses the property of becoming antirachitic by irradiation; and, on the other, some success has followed the attempts to isolate and identify the effective "impurity," the so-called provitamin or precursor of vitamin D.

A recent writer has remarked that the fact that the presence of an impurity in such a well crystallized substance as cholesterol has for more than a hundred years escaped recognition by chemists is explained by the minute amount (1:2,000) concerned, and emphasizes the delicacy of the biologic test. The investigation of the nature of the "provitamin" has been facilitated of late by the introduction of spectroscopic tests in place of the somewhat tedious animal experimentation. Active cholesterol gives a characteristic absorption spectrum in the ultraviolet region. The latest evidence as to the nature of the impurity present in ordinary sterols, of both animal and plant origin, responsible for their activation by ultraviolet rays leads to the view that the receptive substance is a sterol of an unsaturated and labile type, of which ergosterol is the only known representative.

Ergosterol has been found by Rosenheim and Webster [3] to possess the same characteristic absorption spectrum in the ultraviolet as nonpurified cholesterol, the intensity of the absorption, however, being enormously increased. The biologic tests with irradiated ergosterol have been astounding in their outcome. According to the British biochemists [3] a daily dose of 0.0001 mg. of irradiated ergosterol cured and prevented rickets in rats kept on a rachitogenic diet. Even this does not represent the maximal potency of the new artificial products. As Rosenheim and Webster point out, irradiated ergosterol is therefore the most potent antirachitic substance known, 5 mg. being equivalent to approximately 1 liter of a good cod liver oil. They note further that a dose 10,000 times greater than what is at present regarded as an effective dose did not produce obvious ill effects on rats under the experimental conditions used.

THE JOURNAL [2] has maintained that, with the subject in a state of such active study and continual flux, final pronouncements should be withheld. For the moment, at least, the conclusion seems justified that the naturally occurring parent substance of vitamin D is ergosterol or a sterol possessing the same absorption spectrum and physiologic activity. The admixture in cholesterol from all animal sources (brain, eggs, gallstones) of a sterol with more than one double bond seems likely, in view of the well known occurrence in phytosterols from vegetable oils, seeds and the like of other representatives of this class, containing two double bonds. Although ergosterol was originally isolated by Tanret from ergot, and named accordingly, similar or identical sterols ("mycosterols") have been obtained from a wide range of the lower plants. The action of ultraviolet rays on ergosterol leads to an obvious physical change and the production of a yellowish resin. The nature of the intramolecular change

1. Rosenheim, O., and Webster, T. A.: Lancet **1**: 1025 (May 16) 1925. Steenbock, H., and Black, A.: J. Biol. Chem. **64**: 263 (June) 1925. Hess, A. F.; Weinstock, Martha; and Helman, F. D.: ibid. **63**: 305 (March) 1925.

2. The Search for the Antirachitic Vitamin, Current Comment, J. A. M. A. **88**: 1486 (May 7) 1927.

3. Rosenheim, O., and Webster, T. A.: The Parent Substance of Vitamin D, Biochem. J. **21**: 389, 1927.

that gives rise to the vitamin formation is at present unknown. The importance of these discoveries can scarcely be overemphasized; they also reflect great credit on the indefatigable investigators in this country and abroad who have made the striking observations.

DIET CONTROL IN NEPHRITIS

Clinicians are awakening to a realization that the dietary management of certain types of nephritis has perhaps been too rigorously "standardized" in the past. For the most part the diets prescribed are considerably limited in one direction or another; and the restricted intakes are often ordered somewhat indiscriminately for all patients in the category of renal disorder. This makes for convenience of administration, though by no means always for wholesome therapy. The general dictum for the dietary regulation is to spare a diseased kidney unnecessary functional labor, and at the same time furnish the nutrients distinctly appropriate for each case. Sometimes the application of these principles calls for a choice between disadvantages rather than a discrimination between advantages.

One of the recent changes in the dietotherapy of nephritis concerns the physician's attitude toward the protein factor in nutrition. Heretofore the beliefs, on the one hand, that protein feeding can in itself produce nephritis and, on the other, that a diminution of protein catabolism will "spare" the kidneys from the effort of excreting nitrogenous waste products have been responsible for the almost universal institution of low protein intakes in all kidney disorders. Peters[1] has recently pointed out that the loss of protein in certain types of nephritis may be considerable. In the chronic cases a consideration of the problem of nutrition must take into account not merely days but months of tendency toward a negative protein balance. Hence, the maintenance of a minimum nitrogen metabolism and at the same time of nitrogen equilibrium (that is, a condition in which an individual is not forced to draw on his essential tissues for subsistence) can be effected, according to Peters, only by the administration of adequate amounts of both protein and calories. If calories are deficient, more protein will be burned; if protein sinks below a certain level, all the calories in the world will not prevent wasting.

An important cause of prolonged depletion of the protein stores may be found in a persistent albuminuria. The excreted protein is derived from the blood plasma to such an extent as to lead sometimes to actual lowered concentration of plasma proteins. This condition undoubtedly is a contributory factor in the genesis of edema. Various forms of malnutrition, not merely those presented by chronic nephritis, may be attended with low plasma protein content and edema; and these conditions may even develop without the intervention of albuminuria. The supply of adequate protein in such instances thus promises the relief of a series of interrelated untoward symptoms. Studies of parenchymatous nephritis (so-called nephrosis or the edematous type of nephritis) have revealed the fact that patients with this condition have an enormous ability to retain nitrogen over long periods when they are fed an excess of protein, and that this nitrogen storage is not attended by an elevation of the blood nonprotein nitrogen. The only deductions one can make from these facts, Peters adds, are that these patients, either because of the wasting nature of the disease or the misguided restrictions to which they have been subjected by physicians or dietitians, have been starved of protein and are therefore retaining protein to replenish their wasted tissues. It is inconceivable, he concludes, that retention of nitrogen for the restoration of normal tissue can be deleterious to the kidney. Certainly, it does not increase blood nonprotein nitrogen. Even if it did cause moderate nonprotein nitrogen increases, it might not be harmful. In a practical way, it is advisable to remember the dictum that the malnutrition resulting from protein starvation cannot be relieved by any food other than protein. The reduction of the protein intake to a minimum in such conditions should at most be only a temporary expedient adopted, perhaps, to help control certain exacerbations associated with a high nonprotein nitrogen content of the blood and uremic symptoms.

1. Peters, J. P.: The Principles of Diet Control in Nephritis with Especial Reference to Protein and Salt Restriction, J. Am. Diet. A. 2: 137 (Dec.) 1926.

Current Comment

ABSORPTION OF VITAMIN D THROUGH THE SKIN

The antirachitic factor, now commonly designated as vitamin D, seems to be essential for the proper development and maintenance of the skeletal structures. Apparently it is not produced within the living body of man. The necessary supply is ordinarily derived either through the ingestion of antirachitic foods or through exposure of the skin to sunlight or ultraviolet rays. The last mentioned method, while unquestionably effective, is for obvious reasons somewhat uncertain with respect to precise dosage. The alimentary path of introduction, usually the most convenient way for antirachitic therapy, sometimes though rarely interposes barriers that may impair its effectiveness. Alternative procedures are therefore desirable for exceptional emergencies. Accordingly, it has been found that subcutaneous administration of cod liver oil may lead to curative results attributable to the fat-soluble vitamins. Such a method is, however, far from welcome, owing to the extreme difficulty with which any fat can be utilized directly after parenteral introduction—that is, without the intervention of the usual digestive processes. At the Lister Institute in London it has been found by Hume, Lucas and Smith[1] that vitamin D as it is

1. Hume, E. M.; Lucas, N. S., and Smith, H. H.: On the Absorption of Vitamin D from the Skin, Biochem. J. 21: 362, 1927.

secured in irradiated sterols [2] can be absorbed from a small area of uninjured skin in sufficient amount to supply the needs of the organism. The English investigators recall the suggestion of Hess that activation of hydrous wool fat by sunlight and its subsequent absorption through the skin is a possible source of this vitamin. The possibility of antirachitic therapy by inunction is thus presented.

THE PROMOTION OF SUGAR UTILIZATION

The physiologic performance of certain organs is improved by exercise. The muscles exemplify in striking ways the advantages that may accrue from training. They grow and thrive from use, within reasonable bounds at least. Atrophy is a penalty of disuse. Whether increased functional opportunities promote comparable reactions on cells concerned more exclusively with metabolic transformation is not similarly established. Lennox [3] has made a suggestive series of observations indicating that when duplicate amounts of dextrose are administered, either intravenously or orally, at successive intervals the response differs. The temporary hyperglycemia usually resulting is noticeably less after the first dose, thus implying a more prompt utilization. Lennox concludes that his experiments emphasize the importance of glucose as a stimulator of the blood sugar regulating mechanism of the body. Whether this augmented disposal means more rapid storage of sugar as glycogen, more rapid absorption into the tissues, or an increased rate of oxidation cannot yet be foretold. From a practical standpoint, however, Lennox suggests that possibly patients could utilize carbohydrate food better if it were given in small amounts frequently repeated.

AMERICAN TYPE CULTURE COLLECTION

In 1911 a bacteriologic collection and a bureau for the distribution of bacterial cultures was established in the American Museum of Natural History in New York. Dr. C.-E. A. Winslow was placed in charge of this collection, and a catalogue published in December, 1912, listed 350 species. By 1922 the collection had grown so that its care in New York was no longer practical. It was then established in the Army Medical Museum at Washington, D. C., under the auspices of the Society of American Bacteriologists. In 1925 the National Research Council secured a grant from the General Education Board to develop this collection and, if possible, put it on a self-supporting basis. It is now known as the American Type Culture Collection and is assembled in two parts—the fungi under Dr. Charles Thom and Margaret B. Church of the Department of Agriculture, and the other cultures under the care of Drs. George H. Weaver and Leila Jackson in the John McCormick Institute for Infectious Diseases in Chicago. The catalogue today lists about 1,440 cultures, including 256 fungi and 200 yeasts. During the year just ended, 2,750 cultures have been furnished to institutions for purposes of teaching and research, to health laboratories and to individuals. A nominal charge of one dollar per culture, with addition for packing and postage, has been made to meet expenses. Day after day the cultures are transferred and maintained in a state of purity. Here is a complete collection of micro-organisms of various species isolated by bacteriologists all over America, indeed, all over the world, and available for research and study—a collection unprecedented and of value which can hardly be estimated. Its maintenance is a conspicuous achievement for the good of bacteriologic and medical science.

2. Ergosterol, A Precursor of the Antirachitic Vitamin, editorial, this issue, p. 1969.
3. Lennox, W. G.: Stimulation of the Sugar-Regulating Mechanism as Shown by Duplicate Blood Sugar Curves, J. Biol. Chem. **73**: 237 (May) 1927.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

COLORADO

Personal.— Dr. Allen K. Krause, associate professor of medicine, Johns Hopkins University School of Medicine, Baltimore, will give a series of lectures on tuberculosis, July 5-8, in Denver under the auspices of the Denver Sanatorium Association.——Dr. Henry R. McGraw, Denver, has been appointed a member of the state board of medical examiners to succeed Dr. David A. Strickler.——Dr. Joseph R. Blalock, Pueblo, has been appointed medical officer of the One Hundred and Sixty-Eighth Field Artillery (Reserve).

GEORGIA

Home of Richmond Academy of Medicine.—The historic structure which formerly was a part of the medical department of the University of Georgia, Augusta, has again been turned back to the medical school after use for years for the technical courses of the boys' high school. The building will be remodeled as a home for the Richmond County Medical Society, which will be reorganized as an academy of medicine. Its Doric columns and dome will be an interesting feature of the one hundredth anniversary of the founding of the medical school, for which celebration next year plans are being made. In its capacity as the center of organized medicine in the community, a portion will be set aside for the use of the woman's auxiliary and fitted up for the preparation of the famous suppers that precede each gathering of the county medical society.

HAWAII

Territorial Medical Election.—At the annual meeting of the Hawaii Territorial Medical Association, Honolulu, May 2-4, Dr. Arthur G. Hodgins, Honolulu, was elected president, and Dr. Forrest J. Pinkerton, Honolulu, secretary. The next meeting will be held in April, 1928, at Hilo.

ILLINOIS

Liquor Licenses Revoked.—The district prohibition administrator with headquarters in Chicago recently revoked the liquor licenses of the following for violation of the prohibition law and regulations:

Dr. Mat Bloomfield, Joliet
Dr. Cyril L. Hale, Chicago
Dr. Robert S. Kemp, Calumet City.
Dr. George G. O'Brien, Chicago

Personal.—Dr. Robert G. Bell has resigned as assistant medical director of the Oak Forest Tuberculosis Hospital, Oak Forest, to become medical director of the Champaign

County Tuberculosis Sanatorium at Urbana.——Dr. Charles L. Weber assumed the duties of health officer of Cairo, June 1, to succeed Dr. Bellenden S. Hutcheson.——Dr. Frank Cohen, Quincy, was elected president of the Illinois Medical Laboratory Association, it is reported, at the recent meeting in Moline.

Typhoid and Tuberculosis Maps of Illinois.—The thirty-four counties in the extreme southern third of Illinois lost 116 inhabitants by typhoid during 1926; the other sixty-eight counties of the state lost only 114. The population of the thirty-four southern counties is about 1 million people, and of the other sixty-eight counties about 6 million. The state department of health has divided a map of the state into three parts illustrating the typhoid mortality. The northern third had a typhoid mortality of 1.3 per hundred thousand in 1926, the central portion, 3.3, and the southern portion, 11.8. The typhoid death rate of the state as a whole, 3.2 per hundred thousand of population, was the lowest on record in a full year. There were twenty cities of 10,000 or more population and twenty-seven counties from which no deaths at all from typhoid were reported. A map prepared by the state health department for tuberculosis tells a different story. The southern thirty-four counties are again indicated in black with a death rate of 80.8 per hundred thousand for tuberculosis. The northern thirty-three counties of the state, also represented in black, have the death rate of 80.7; the central portion of the state is only traced in black lines for here the tuberculosis mortality fell to 60.4. For the state as a whole the tuberculosis death rate in 1926 was 76.3, a decrease of nearly 4 per cent over the previous year, while the general death rate for the state went up more than 2 per cent.

Chicago

Hospital News.—The Illinois Masonic Hospital, Wellington Avenue and King Place, has dedicated a new unit of eighty beds costing about $700,000.

Society News.—The Chicago Tuberculosis Institute was awarded the Christmas seal publicity prize offered to cities raising more than $100,000 in the Christmas seal sale at the National Tuberculosis Conference, recently, in Indianapolis. The last year's seal sale amounted to $225,000.——The Medical and Dental Arts Club met in the auditorium of the new building at Wabash Avenue and Lake Street, June 6, and was addressed, among others, by Dr. Herman N. Bundesen, city commissioner of health, on "Flood Control Problems of the Mississippi."——Dr. Frank Lee Stone addressed the Chicago Gynecological Society, June 17, on "Lipiodol and Roentgen Ray as a Diagnostic Aid in Gynecology," and Dr. Carl P. Bauer on 'Comparative Study of Convalescence in the Vaginal, Supravaginal and Total Abdominal Hysterectomy in One Hundred and Fifty Selected Cases."

Appointments at Northwestern—Kendall and Ranson Return.—Arthur I. Kendall, Ph.D., professor of bacteriology and public health at Washington University School of Medicine, St. Louis, has been appointed professor of bacteriology at Northwestern University Medical School. Dr. Kendall was formerly dean at Northwestern University Medical School. William T. Bovie, Ph.D., Medical School of Harvard University, Boston, has been appointed professor of biophysics at Northwestern; Dr. Hamilton R. Fishback, Chicago, has been appointed professor of pathology; Dr. Harry B. Culver, assistant professor of urology; Goodwin L. Foster, Ph.D., University of California Medical School, assistant professor of biochemistry, and Dr. Stephen W. Ranson, professor of neuro-anatomy, Washington University School of Medicine, has been appointed to a similar position at Northwestern; Dr. Ranson was formerly professor of anatomy at Northwestern. The new buildings on the McKinlock Campus, East Chicago Avenue near the lake, were formally dedicated, June 13-17, during a week of special clinics and meetings, which were noted in THE JOURNAL, May 21, p. 1647.

Home for Convalescent Children Affiliates with University.—The Country Home for Convalescent Children at Prince Crossing near West Chicago was formally taken over by the University of Chicago, June 13, at a ceremony presided over by President Max Mason, and attended by members of the board of trustees of the university and the convalescent home and by others. The home was founded in 1911 by Mrs. W. J. Chalmers after two years had been spent in raising sufficient funds. The property comprises 96 acres and buildings which were turned over to the university, as well as the endowment funds of about $1,200,000. The institution was founded for the care, cure and education of crippled children, and at present 101 are receiving its benefits. It will be an important link in the medical progress of the university, President Mason said, especially in connection with the work of the Bobs Roberts Memorial Hospital for Children, and in connection with the pediatric and orthopedic departments. The affiliation was first suggested several years ago by Dr. Frank Billings. The formal transfer took place, Monday, in the library of the home which was built by funds donated by Mrs. Chalmers' daughter, Mrs. Norman Williams. On the new board of trustees are Mr. and Mrs. Chalmers, Max Mason, Frederic C. Woodward, Charles H. Schweppe, Albert H. Sherer and Frank McNair, and there is a board of managers of thirty-two members.

INDIANA

Temporary Injunction Against Vaccination Order.—Judge Leathers issued a temporary injunction, June 4, prohibiting the board of health and school board of Indianapolis from enforcing an order requiring vaccination against smallpox for attendance at school. This action followed the judge's overruling of a demurrer presented on behalf of the city board of health and the school board to an injunction suit filed by opponents of the order requiring vaccination. Dr. Herman G. Morgan, secretary, city board of health, said, it is reported, that the number of cases of smallpox had increased to 224; that there was at that time an average of ten new cases a day and two deaths during May, and that the vaccination order was necessary.

Society News.—At a meeting of the Sixth District Medical Association, May 26, Connersville, Dr. Larue D. Carter, Indianapolis, spoke on "Head Injuries"; Dr. Martin H. Fischer, Cincinnati, "Arteriosclerosis," and Dr. John A. MacDonald, Indianapolis, "Subdiaphragmatic Abscesses."——Dr. Evarts A. Graham, St. Louis, addressed the staff of St. Mary's Hospital at the annual banquet, Evansville, May 25, on "Chest Surgery."——Dr. John H. Reed, Logansport, was elected president of the Eleventh Councilor District Medical Society, May 19; the loving cup for the best attendance of constituent societies was awarded to Carroll County. The next meeting will be at Delphi.——Dr. Charles S. Williamson, Chicago, professor of medicine, University of Illinois College of Medicine, Chicago, addressed the Tippecanoe County Medical Society, June 9, on "Newer Knowledge of Iron in the Anemias," and held a clinic at St. Elizabeth's Hospital on heart and kidney cases.——Dr. Virgil E. Simpson, Louisville, Ky., addressed the Muncie Academy of Medicine, April 22, on "Diabetes Mellitus."

IOWA

Dr. Griswold Goes to Michigan.—Dr. Don M. Griswold, one of several teachers at the State University of Iowa College of Medicine who resigned recently, has been appointed state deputy health commissioner of Michigan, it is reported. Dr. Griswold graduated from the University of Michigan, and was formerly director of laboratories in the Detroit Department of Health. From there he went to the International Health Board of the Rockefeller Foundation, then to the State University of Iowa College of Medicine as professor of hygiene and preventive medicine, and as state epidemiologist. Dr. Griswold for a time was the state health commissioner of Iowa.

KANSAS

Dr. Brinkley's Italian Recognition Annulled.—It appears that the University of Pavia, Italy, in July, 1925, issued a diploma of graduation from that university to John R. Brinkley, Milton, Kan., based on the recognition of a diploma granted him by the Eclectic Medical University of Kansas City, Mo. A letter from the rector of the University of Pavia states that the ratification of Brinkley's credentials has been annulled, and through the Italian consul Brinkley has been asked to return the document given him. An item in regard to the annulment of the recognition granted to Dr. Brinkley's credentials appears in the current number of the Italian medical journal *Policlinico*.

LOUISIANA

Society News.—Dr. Abraham L. Levin addressed the Orleans Parish Medical Society, New Orleans, May 23, on "Extensive Colonic Polyposis with Report of Three Cases"; Dr. Elliott Kiblinger, "Management of Labor," and Drs. Hilliard E. Miller and Walter F. Henderson on "Determination of Pathology in the Fallopian Tubes by the Injection of Iodized Oil."

Health Conference Concerning Flooded States.—A conference on health in the flooded area of the Mississippi Valley was held in New Orleans, June 5. In attendance were Hugh S. Cumming, Surgeon General, U. S. Public Health Service; Drs. William R. Redden, of the Red Cross; John A. Ferrell, of the Rockefeller Foundation; John McMullen, Allan J. McLaughlin, William C. Rucker, Knox E. Miller and Kenneth F. Maxcy, all of the U. S. Public Health Service, and the following state health commissioners: Drs. Oscar Dowling, Louisiana; Felix J. Underwood, Mississippi; James Stewart, Missouri; Arthur T. McCormack, Kentucky; Eugene L. Bishop, Tennessee; William F. King, Indiana; Valeria H. Parker, of the American Social Hygiene Association, and others. Resolutions were passed after an all-day session providing for a rehabilitation program in the seven states affected, according to which a health unit would be established in each county, consisting of a full-time health officer, sanitary inspector, public health nurse and office assistants, and a field training station in the northern part of Louisiana. The program would be financed by the state, the county, and the Rockefeller Foundation, and the Red Cross when necessary, with the understanding that the parish will take over the expenses gradually and as soon as possible. During the afternoon, the conference went aboard the tug *Sampson* to go down the river to Caernarvon to view the extent of the flood.

MASSACHUSETTS

State Medical Election.—At the annual meeting of the Massachusetts Medical Society, June 6-8, Boston, Dr. John M. Birnie, Springfield, was elected president; Dr. Thomas J. O'Brien, Boston, vice president; Dr. Walter L. Burrage, Brookline, secretary, reelected; Dr. Arthur K. Stone, Brookline, treasurer, and Dr. Walter B. Cannon, Cambridge, orator.

Boston Floating Hospital Burned.—While undergoing the annual overhauling at the dock, the Boston Floating Hospital was destroyed by fire, June 1, at a loss of about $150,000. There were no patients aboard, and the eight men in charge of the work escaped injury. The Boston Floating Hospital has been in service for several years carrying thousands of tenement children down the harbor in summer on fresh air cruises.

Harvard Declines Eugenic Legacy.—Harvard University has declined the bequest of the late Dr. James Ewing Mears of Philadelphia of about $60,000 for establishing a course in eugenics. Dr. Mears's will provided for a trust fund, the income of which was to be paid to his sister during her life, and then to be turned over to Harvard College. It was announced, May 7, that the university had voted to decline the bequest, the reason reported given being in part that Harvard College did not deem it right to pledge itself to teach somewhat permanently that the treatment of defective and criminal classes by surgical procedure was a sound doctrine.

MICHIGAN

Smallpox Increases.—During the first twenty-four days of May, 151 cases of smallpox were reported to the state health department. The state health officer is reported to have said that each day witnesses smallpox reported from communities which previously had escaped. An appeal was made to institute, immediately, a vaccination campaign among all persons who had not been successfully vaccinated within the last five years.

Society News.—Mr. H. M. Nimmo, editor of the Detroit *Saturday Night*, was the principal speaker at the joint meeting of the Wayne County Medical Society and the Alumni Association of the Detroit College of Medicine and Surgery, June 14.——Dr. Guy L. Kiefer, state commissioner of health, recently addressed the Alpena County Medical Society and physicians from surrounding towns, and gave a public address at Alpena on "Matters Pertaining to Individual and Community Health"; in the evening he addressed the physicians at a dinner on "Acute Infectious Diseases, Especially Scarlet Fever and Its Prevention and Treatment by the Use of Serum."——Dr. Don M. Campbell, Detroit, addressed the St. Clair County Medical Society, Port Huron, recently on "Otitis Media, Mastoid Infection and Complications Thereof."——Dr. Victor C. Vaughan has been elected an honorary member of the Washtenaw County Medical Society.——The Michigan Trudeau Society met jointly with the Genesee County Medical Society, Flint, May 11; Dr. Eugene B. Pierce, Flint, gave a clinic on "Bronchiectasis in Children"; Dr. C. E. Bradley, Ann Arbor, and Dr. George J. Curry, Flint, gave a clinic on bone and joint tuberculosis; Dr. Max Pinner, Northville, gave a demonstration of exudative and productive tuberculosis, and Dr. James B. Amberson, Jr., Detroit, spoke on "Roentgen-Ray Examination of the Chest." At the dinner, Dr. Clarence L. Hyde, East Akron, Ohio, spoke on "Light Treatment in Surgical Tuberculosis," and Dr. Maurice Lewison, Chicago, "Some Mistakes in the Diagnosis of Pulmonary Tuberculosis."——The Kent County Medical Society held a joint meeting with the Holmes Dental Club of Grand Rapids, recently, the principal speaker being Dr. E. C. Rosenow, Mayo Clinic, Rochester, Minn., whose subject was "Further Studies on Focal Infection and Elective Localization"; more than 200 members attended this meeting.

MISSISSIPPI

Personal.—Dr. May F. Jones has resigned her position at the Mississippi State Sanatorium on account of ill health, and will return to her home in West Point, Va.; Dr. Jones is said to be the first woman to take the state board medical examination in Mississippi. Since 1900, Dr. Jones has been engaged in service for the state of Mississippi at the State Woman's College, Columbus, the State Teachers' College, Hattiesburg, and the Mississippi State Sanatorium. Dr. Jesse L. Roark, Water Valley, will take over the duties formerly performed by Dr. Jones.——Drs. Edwin E. Benoist, Natchez, Eugene S. Bramlett, Oxford, and Ernest L. Posey, Jackson, were elected vice presidents of the Mississippi State Medical Association at the annual meeting at Jackson.

MISSOURI

Society News—Auxiliary Wants an Icebox.—The woman's auxiliary of the St. Louis Medical Society needs an icebox for their kitchen. Any member of the society who is replacing an old style icebox for a new type is requested to donate it to the auxiliary, whose kitchen, presumably, is in the beautiful building which the St. Louis Medical Society dedicated a few months ago. At the meeting of the society, June 7, medals and awards of merit for scientific achievement were presented to the following members: Drs. Evarts A. Graham, Warren H. Cole, Glover H. Copher and Sherwood Moore. Dr. Roland Hill addressed the meeting on "Congenital Pyloric Stenosis."

Horton's License Revoked at Last.—The state board of health revoked the license to practice medicine in Missouri of Dr. Ray B. Horton, of Purdy and Kansas City, May 27, after having found him guilty of fraudulently misrepresenting his educational qualifications. This case has been before the board for about two years, various legal maneuvers having been resorted to to evade trial. Horton was one of about sixty physicians cited in 1925 as the result of disclosures in diploma mill investigations to show cause why their licenses should not be revoked. When Horton was licensed in 1923, it appears that he presented credentials to the board indicating that he had completed a four year high school course, three years of study at the St. Louis College of Physicians and Surgeons, and one year at the Kansas City College of Medicine and Surgery. It was shown at the trial, it is reported, that during two of the four years he claimed to have attended high school, he was attending the Kansas City Veterinary College and that the superintendent of the Purdy high school at the time, Leslie K. Grimes, testified that the signature on the high school diploma was not his. Furthermore, during the time that Horton, according to his credentials, was attending the St. Louis College of Physicians and Surgeons, he was practicing as a veterinarian, as shown by advertisements in newspapers. Three witnesses testified at the hearing of the board that Horton had solicited money from them in exchange for his alleged influence with the old state board of health of which Dr. Cortez F. Enloe was secretary. One witness is reported to have said that he gave Horton $1,000 in cash, then took the state board examination and failed. Another witness testified that he gave Horton $500, and then failed to get an examination. The third testified that he gave Horton $500, mostly in checks, photostatic copies of which were submitted as evidence. An interesting feature of Horton's effort to obtain degrees was reported to these headquarters to the effect that pressure was brought to bear on the University of Budapest to grant him a diploma, although he was unable to pass the examination. The reports indicate that the university was

led to believe that unless a diploma was granted to Horton, Hungarian physicians desiring to practice in the United States would be prevented from doing so, and that the threat was made by Horton that financial support to the university from the Rockefeller Foundation would be withdrawn if a diploma was not issued—a claim which, of course, had no basis in fact. If these statements are true, the University of Budapest was deceived. Horton's case is an illustration of the difficulty that may arise in getting rid of an improperly qualified practitioner once he has been licensed, and demonstrates the care that should be taken by licensing boards in scrutinizing the credentials of candidates.

NEW JERSEY

Society News.—Dr. Henry H. Ritter, New York, addressed the Hudson County Medical Society, May 3, on "Treatment of Certain Ambulatory Traumatisms."——Dr. Barton C. Hirst, Philadelphia, addressed the Mercer County Medical Society, May 11, on "Modern Methods of Diagnosis in the Treatment of Obstetric Conditions."——At the public meeting of the Academy of Medicine of Northern New Jersey, Newark, March 16, Elmer E. Brown, LL.D., chancellor, New York University, lectured on "The Scientist and Artist."

Dr. Dickinson Honored.—About 300 friends of Dr. Gordon K. Dickinson, Jersey City, attended a dinner in his honor at the Hotel Pennsylvania, New York, April 2, to celebrate his completion of fifty years in the active practice of medicine. At the conclusion of the dinner, a beautiful bronze figure, "The Life Saver," was presented to Dr. Dickinson by the Hudson County Medical Society as a token of esteem. Dr. Berthold S. Pollak was toastmaster, and among the speakers were Drs. Charles Gordon Heyd, John O. Polak and Judge Robert L. Cary. Dr. Dickinson established the first tuberculosis clinic in New Jersey; he was chairman of the committee that developed the city hospital in Jersey City, consulting surgeon to Christ's Hospital, and in 1919 was president of the Medical Society of New Jersey. He has been engaged in many other scientific and civic activities of the community.

NEW YORK

Memorial to Dr. MacDonald.—During the fifty-fourth annual meeting of the Association of the Alumni of the Albany Medical College, Albany, June 1, the Dr. Willis G. MacDonald Memorial was unveiled. Dr. MacDonald was formerly professor of abdominal and clinical surgery at Albany Medical College, and shortly after his death a fund of about $18,000 to construct a physiologic laboratory in the college was raised. The fund, however, not being sufficient to build the laboratory was turned over to the college, and a part of the new building which was dedicated, June 13, is to be known as the MacDonald Memorial.

Hospital News.—About 250 delegates attended the third annual conference of the New York State Hospital Association at Syracuse, recently, at which time Col. Louis C. Trimble, superintendent, New York Post-Graduate Medical School and Hospital, assumed the presidency of the association.——A group of Long Island City physicians has organized the Boulevard Sanatorium, and has filed plans for the erection of a three story, fire-proof, private hospital of about fifty beds for medical, surgical and obstetric patients at the southeast corner of Jamaica and Sixteenth avenues. There will be continuous service maintained in all departments with resident physicians in attendance, although patients will be treated by their own private physicians and will have the benefit of the consulting staff. The hospital will be nonsectarian.

Liquor Licenses Revoked.—The district prohibition administrator recently revoked the liquor licenses of the following for the reasons indicated:

Dr. Forrest Hayes, Jr., Flushing, did not in good faith issue twenty-two prescriptions for intoxicating liquor as a medicine, in that after careful physical examination of his patients he did not believe the use of such liquor as a medicine by such persons was necessary and would afford relief to them.

Dr. Hirsch L. Messman, Brooklyn, record Form 1402 and book of prescription blanks and stubs not available for inspection. Did not keep a record of prescriptions in Form 1402 prior to March 15, 1927. On inspection claimed book of prescriptions, blanks and stubs was lost or stolen and he had not then and has not since notified this office of the loss of said book. False records in Form 1402.

Dr. Joseph S. Amster, New Hampton, issued prescriptions without a careful physical examination, and not believing that the liquor was to be used as a medicine.

Dr. Ransom S. Robertson, Brooklyn, unlawfully issued prescriptions for liquor and made false entries thereon. Failed to issue prescriptions in order of the serial blank numbers. Failed to enter on prescription in duplicate in own handwriting all the data called for on Form 1403.

New York City

Hospital News.—The Jewish Memorial Hospital in the Bronx has created departments of cardiology, basal metabolism and plastic surgery, and the board of trustees will entertain applications for associates in these departments.——The New York Hospital will receive nearly 10 per cent of the residue of the estate of the late Payne Whitney; this legacy, it is reported, approximates $10,000,000.——The Jewish Mental Health Society has secured a tract of 55 acres at Hastings-on-the-Hudson as a site for a hospital for curable mental diseases, the initial capacity of which will be twenty-five beds.

Warning Against Bathing in Certain Bays.—The city health commissioner issued a warning, June 1, it is reported, against bathing in Sheepshead, Pelham and Jamaica bays and in the East, North and Harlem rivers on account of the pollution of those waters by sewage and industrial waste. The health department has conducted a survey of the waters recently, and the warning was based partly on the results of finding evidence of heavy pollution. The waters at Coney Island, Rockaway, Staten Island and Long Beach beaches are still considered safe for bathing purposes. Efforts are being made to make the waters about the city suitable for bathing, but success depends in large part on the cooperation of the people in strictly observing the sanitary laws.

Drs. Hess and Rous Awarded Medals.—The John Scott Bronze medal of the Franklin Institute of Philadelphia and $1,000 in funds were awarded to Dr. Alfred F. Hess, clinical professor of children's diseases, University and Bellevue Hospital Medical College, June 2, according to the New York *Medical Week*, for his studies on the "operative influence of light on rickets and on the remarkable effects produced by the ultraviolet irradiation not only of the living animal, but also on various foods, showing in the latter instance that the vitamin value in these substances could thus be increased." Dr. Francis Peyton Rous, pathologist, Rockefeller Institute for Medical Research, was designated for his invention of devices and the development of a filtration technic for separating from tumor cells a substance producing sarcoma in fowls.

Personal.—Dr. Charles Rosenheck has been appointed neurologist to the Midtown Hospital, New York.——Dr. Henry Dawson Furniss has resigned as professor of gynecology at New York Post-Graduate Medical School and Hospital, and has been appointed consulting gynecologist to that institution.——Dr. Alexis Carrel sailed, June 4, for France for his annual outing on his estate.——Dr. Simon Flexner of the Rockefeller Institute for Medical Research was awarded the lectureship of the Association of American Physicians at its annual meeting, Atlantic City, May 4.——Capt. John W. Cleave, Medical Corps, U. S. Army, now on duty at Governors Island, has been ordered to Honolulu for duty and will sail about June 30.——Dr. Edwin C. Chamberlain has resigned from the New York office of the U. S. Veterans' Bureau after about seven years' service.

Testimonial Dinner to Dr. Guthrie.—A group of about forty-five lay and professional friends gave a testimonial dinner in New York, June 14, to Dr. Clyde G. Guthrie, who recently resigned the medical directorship of the Lawrenceville School, Lawrenceville, N. J., and is about to locate in Cincinnati. Among those present were Drs. Lewellys F. Barker, John M. T. Finney, and Hugh H. Young, all of Johns Hopkins University Medical Department, Baltimore; Mr. F. Highlands Burns, president, Maryland Casualty Company, and about fifteen other Baltimoreans; Drs. Walter W. Palmer, Haven Emerson, Alphonse R. Dochez, William Darrach and Robert L. Levy, of Columbia University; Dr. Lewis Conner of Cornell; Dr. Wade H. Brown, Rockefeller Institute; Drs. Thomas Grier Miller, Alexander Randall, O. H. Perry Pepper, all of the University of Pennsylvania School of Medicine; Drs. Kenneth Blackfan and William L. Moss of the Medical School of Harvard University; Dr. Evans of Pittsburgh; Dr. Frank D. Conroy of Cincinnati; Mr. Thatcher M. Brown of Brown Brothers, New York; Judge Bodine of the U. S. Court, Trenton, N. J.; Mr. Frank Reid and Mr. H. M. Reid of New York, and Mr. Henry Young and Mr. C. H. Fetter of Trenton.

NORTH CAROLINA

Personal.—Dr. Wilbur A. McPhaul has been reelected city health officer of Charlotte, it is reported, at an increase of salary.——Dr. James M. Parrott, Kinston, has been appointed a member of the board of directors of the State Industrial

Farm Colony, which was authorized by the last legislature. ——Dr. Carey L. Harrington, Greenville, has taken up the duties of county physician of Durham County.

Babies' Hospital Destroyed.—The Babies' Hospital at Wrightsville Beach near Wilmington was completely destroyed by fire, May 28, at a loss of about $40,000; no lives were lost. Plans have been made for the immediate construction of a larger and fire-proof babies' hospital, and Dr. James B. Sidbury, head of the former hospital corporation, has offered to donate the site to a new corporation which, if accepted, would make it more of a community institution than a private hospital.

Society News.—About 125 physicians attended the Tenth District Association meeting at Marion, June 1, under the presidency of Dr. Charles Z. Candler, Sylva, who gave an address on "The Power of Organized Medicine." The president and secretary of the state medical society, Drs. John T. Burrus, High Point, and Lewis B. McBrayer, Southern Pines, and Dr. Charles O'H. Laughinghouse, Raleigh, secretary of the board of health, were present. Dr. Joshua F. Abel, Waynesville, has been appointed a councilor of the Tenth District to succeed the late Dr. Arthur T. Pritchard.—— Twenty students completed the two year course in medicine at Wake Forest College, and received certificates to that effect at the commencement, June 2. The final two years of study are to be taken elsewhere.

NORTH DAKOTA

State Medical Election.—Dr. Thomas Mulligan, Grand Forks, was installed as president of the North Dakota State Medical Association at the meeting, May 31-June 2, Grand Forks; Dr. William F. Sihler, Devils Lake, was made president elect; Drs. John Crawford, New Rockford, and Andrew Carr, Sr Minot, vice presidents; Dr. John G. Lamont, San Haven, secretary, and Dr. William W. Wood, Jamestown, treasurer. The *Journal-Lancet* was continued as the official organ of the association, and the next annual meeting will be at Devils Lake. The registration at the Grand Forks meeting was 172. The speakers were Dr. Arthur Steindler, State University of Iowa College of Medicine, Iowa City, whose subject was "Arthopathies or Charcot Joints"; Dr. Frank E. Burch, University of Minnesota Medical School, Minneapolis, "Ocular Manifestations of Diabetes"; Dr. Frank L. Jennings, Oak Terrace, Minn., "Treatment of Pulmonary Tuberculosis"; Dr. Frederick C. Rhodda, University of Minnesota Medical School. "Prevention of Acute Contagious Diseases in Children." Drs. C. S. McVicar and William C. MacCarthy, both of the Mayo Clinic, Rochester, Minn., gave a symposium on "Diagnosis of Gastric and Duodenal Disease"; Dr Wallace H. Cole's subject was "Fractures" and Drs. William Boyd and Edward W. Montgomery of the University of Manitoba Faculty of Medicine, "Pathology and Treatment of the Anemias"; Dr. Harley E. French, dean, University of North Dakota School of Medicine, "Demonstration of Epiphyseal Lines," and Dr Edgar A. Pray, Valley City, "Intercostal Neuralgia." Dr. Paul D. Mossman, U. S. Army Medical Corps, gave a clinic on "Trachoma." Dr. N. Oliver Ramstad, Bismarck, presided at the banquet, June 2.

OHIO

Toledo Academy Establishes Endowment Fund.—The Toledo Academy of Medicine has established a $300,000 endowment fund for medical research, following the insurance plan. Members will take out policies, naming the endowment fund of the academy of medicine as beneficiaries. The fund will be augmented also by gifts during life and by bequests by will. It is expected that more than 300 policies will be taken out among the 400 members; eight were taken out on the first day the plan was in force. The endowment fund committee, comprising the trustees and president of the academy, will make all contracts and direct the expenditure of all funds in accordance with certain principles set forth in the plan. The purpose of the fund is to encourage investigation in the nature and cause of disease and the methods of prevention and treatment, and to disseminate medical knowledge for the protection of the public health. The power of the endowment fund committee may extend to the building, purchasing, equipping and maintaining of laboratories or other buildings; to owning land for breeding plants and animals; to appointing committees of experts to direct research; to cooperating with other associations engaged in similar work, and to maintaining museums. In general, the committee is empowered to perform all things necessary for the promotion of the objects of the fund. Only the income will be used, the principal being kept intact. The original suggestion for establishing an endowment fund was made by Dr. James A. Duncan at the annual meeting in January; it was accomplished in May. Dr. Duncan is head of the endowment committee.

PENNSYLVANIA

Society News.—The Tri-County Medical Society (Lebanon, Dauphin, Lancaster) will hold its annual meeting at the Colonial Country Club, Harrisburg, June 22; there will be a luncheon, business meeting, golf and cards, and the annual dinner in the evening.——Dr. Thomas D. Mills addressed the Harrisburg Medical Club, May 20, on "High Blood Pressure and the Patient"; the club's summer picnic will be held at Taneytown, Md., July 1.——Dr. William E. Wright addressed the Dauphin County Medical Society, Harrisburg, May 3, on "Clinical Manifestations on Encephalitis Lethargica."

Award of Fellowships.—The provost of the University of Pennsylvania announced, June 5, the award of fellowships in neuropsychiatry established by the Commonwealth Fund in the graduate school of medicine to Drs. Bernard J. Alpers, Philadelphia; Forrest N. Anderson, Lawrence, Kan.; William George Ferguson, Ann Arbor, Mich.; Alberta L. Jenkins, Philadelphia; Paul E. Kubitschek, Philadelphia; Norvelle C. Lamar, Philadelphia; Gerald H. J. Pearson, Ottawa, Ont., and Raymond W. Waggoner, Philadelphia. The following fellowships were also awarded: Frederick W. Sunderman, Robert M. Givin fellowships in research medicine; John R. Paul, Robert Robinson Porter fellowships in research medicine; Thomas G. Miller, Henrietta Heckscher memorial fellowship in medical research; William Blair Mosser, Bennett fellowship in surgery; Verne G. Burden, F. M. Kirby fellowship in surgical physiology; Selling Brill, Hunter fellowship in surgery; Lewis Kraeer Ferguson, Agnew fellowship in surgery; Richard A. Kern, Lewis Godey fellowship in medicine, and Edward J. Ryan, J. William White fellowship in urology.

Philadelphia

Fund for Professorship of Therapeutics.—The will of the late Dr. Milton B. Hartzell, recently admitted to probate, showed a bequest of $100,000, it was announced, June 6, to the University of Pennsylvania to establish the Milton Bixler Hartzell professorship of therapeutics. Dr. Hartzell, formerly professor of dermatology at the university and consultant of the city department of health, died in April.

Commencement at Jefferson.—The one hundred and second commencement of Jefferson Medical College was held in the Academy of Music, June 3. There were 138 graduates representating thirty-two states and foreign countries; fifty-one members of the class were commissioned as first lieutenants of the army medical officers reserve corps, and special awards were made to twenty-two. The honorary degree of doctor of science was conferred on Dr. Francis X. Dercum, emeritus professor of nervous and mental diseases, and Dr. Fordyce Barker St. John, professor of surgery, Columbia University College of Physicians and Surgeons, New York, who delivered the commencement address. The president of the board of trustees, Alba B. Johnson, conferred the degrees, and the dean, Dr. Ross V. Patterson, awarded the prizes; Major Frederick H. Mills presented the army commissions. At the annual dinner of the alumni association of Jefferson the previous day, the class of 1902 presented an oil portrait of Dr. John Chalmers Da Costa to the school. Dr. Da Costa has been on the faculty for forty years.

RHODE ISLAND

Personal.—Dr. Edward S. Brackett has been appointed chief of staff of the Providence Lying-In Hospital; Miss Edwina Porter, superintendent of nurses of the hospital, has resigned after twenty-three years of service, ten of which were as superintendent of nurses.——Dr. Isaac Gerber, Providence, has been appointed visiting radiologist to the Pondville Hospital, which is to be opened by the governor of Massachusetts, June 21, at Norfolk, for the treatment of cancer.

State Medical Election.—The annual meeting of the Rhode Island Medical Society was held in Providence, June 2, under the presidency of Dr. Herbert G. Partridge. The anniversary chairman at the annual dinner in the Biltmore Hotel was Dr. Lucius C. Kingman, Providence, and the speakers were Dr. James J. Walsh, New York, and Prof. George P. Baker

of Yale University. Among the scientific papers presented were "The Ketogenic Diet in the Treatment of Epilepsy in Children," Dr. Fritz B. Talbot, Boston; "Observations on Blood Pressure," Dr. William E. Preble, Boston; "Injuries of Bones and Joints in the Upper Extremity" Dr. Thomas Turner Thomas, Philadelphia; "What the Mind Does to the Body," Dr. James J. Walsh, New York; "Prenatal Problems," Dr. Paul Appleton; "Hyperesthetic Rhinitis," Dr. Francis B. Sargent, and "Dentistry as the Medical Profession Sees It," Ernest S. Calder, D.D.S., all of Providence. Dr. Norman MacLeod, Newport, was elected president at this meeting; Drs. Arthur H. Harrington, Saylesville, and Frank T. Fulton, Providence, vice presidents; Dr. Jesse Mowry, Providence, treasurer, and Dr. James W. Leech, Providence, secretary. The next meeting will be held in Providence, June 7, 1928. The subject of the Fisk Fund prize essay for the coming year will be "Epidemic Encephalitis."

TEXAS

University News.—The east wing of the main medical college building at Galveston is being remodeled to provide space for a larger number of students, and to improve the facilities for teaching. Forty-six graduates of the school were awarded diplomas at the commencement exercises, May 31.

Bank President Resigns to Practice Medicine.—Dr. Hatch W. Cummings has retired as president of the Planters' and Merchants State Bank at Hearne, it is reported, in order to devote more time to the practice of medicine and to his duties as president of the state board of medical examiners. Dr. Cummings is a past president of the Texas State Medical Association; he has served as president of the bank since 1910.

VERMONT

Meeting of Health Officers.—Health officers from all parts of the state met at Burlington, June 2-3, in the College of Medicine Building for the annual conference. Among others, Dr. Edward J. Rogers spoke on "Control of Water Supplies" and "Tuberculosis Work in Vermont"; Dr. Charles F. Dalton, "Prevention and Control of Communicable Diseases"; Dr. Charles F. Whitney, "Health Officers' Use of the Laboratory"; Dr. Fred S. Kent, "Venereal Diseases"; Dr. William G. Ricker, "School Houses and School Children"; Dr. Clarence H. Burr, "The Problem of Nuisances," and Dr. John P. Gifford, "Relation of the Health Officer to the Physician."

WYOMING

Hospital News.—A new $125,000 hospital for tuberculous patients has been completed at Basin.

Personal.—Dr. Thomas E. Marshall, Sheridan, has been appointed county health officer for a term of four years to succeed Dr. Edwin E. Whedon.——Dr. Nels C. Nelson, Cheyenne, has been appointed health officer of Laramie County to succeed Dr. John H. Conway.——Dr. Louis A. Williams, Laramie, has been appointed health officer of Albany County to succeed Dr. Richard M. Leake.—— Dr. Victor A. Mokler, Thermopolis, has been named state health officer for Hot Springs County.——Dr. Maurice J. Goldberg, Kemmerer, has been appointed health officer of Lincoln County to succeed Dr. James R. Marquis, Kemmerer.

State Medical Meeting.—The twenty-fifth annual meeting of the Wyoming State Medical Society will be at Cheyenne, June 27-29, with headquarters in the Plains Hotel and under the presidency of Dr. Vincent J. Keating of Sheridan. The meeting will be held in the Masonic Temple at Nineteenth and Capitol avenues, where, Monday afternoon, among others, Dr. Jabez N. Jackson, Kansas City, President of the American Medical Association, will give an address. The house of delegates will have its first meeting, Monday afternoon, followed by a smoker in the evening; Tuesday morning will be devoted to clinics, and Tuesday afternoon and Wednesday to papers and discussions. Prof. Charles W. M. Poynter of the University of Nebraska College of Medicine, will speak on "Routes of Extension of Peritoneal Infection"; Marcus O. Shivers, Colorado Springs, "Problems of Goiter"; Frederick L. Beck, Cheyenne, "Sinus Problems"; Water W. Yates, Casper, "Squint," and Archie P. Kimball, Casper, "Diagnosis and Treatment of Gastric and Duodenal Ulcers." Among other speakers will be Drs. Arthur T. McCormack, Louisville, Ky.; Harold Gifford, Omaha; Albert R. Mitchell, Lincoln, Neb.; George P. Johnston, Cheyenne. Dr. Edson L. Bridges of the University of Nebraska College of Medicine will conduct a medical clinic. Entertainment, as the secretary says, truly western in style, will be provided for the members and their wives. One of the features will be a banquet Tuesday evening with dancing and bridge.

GENERAL

American Board of Otolaryngology.—At the examination of the American Board of Otolaryngology, held, May 16-17, Washington, D. C., 142 men were examined, 119 of whom passed and twenty-three failed; at the examination held in Spokane, Wash., June 4, forty-six passed and six failed. The next examination will be in Detroit, September 12. Applications to take the examination should be sent to Dr. Hanau W. Loeb, secretary, 1402 South Grand Boulevard, St. Louis, Mo.

Centenary of Journal Next Year.—When the former owners of the *Boston Medical and Surgical Journal* relinquished control, they incorporated the condition that the journal complete its one hundredth anniversary under its present name; that anniversary will occur next year. The present management is considering changing the name of the journal then to the *New England Journal of Medicine*, and making it the official journal of the various New England states medical societies.

Wild Rats and Food Poisoning.—Rats gathered at various places in San Francisco have been studied by the Hooper Foundation for Medical Research at the University of California, in cooperation with the U. S. Public Health Service, to determine whether they are capable of transmitting bacterial disease. Among 775 rats examined, fifty-eight were found infected with bacterial diseases which could be transmitted, and about 2 per cent of them carried highly virulent bacteria in their intestinal tract and were capable of infecting food by their droppings. This study was aside from that of rat plague, and if the data presented pictures conditions as they are, the danger of food poisoning from rats is an important problem, particularly so in the cities in which rat eradication work is not carried on. In another investigation made in Oakland by the Hooper Foundation on methods of preventing food poisoning, it was discovered there are four rat diseases transmitted by rodents in that city: hemorrhagica septicemia, plague, rat typhoid and pseudotuberculosis.

Study of Mosaic Diseases of Plants.—An expedition has returned from Africa with a collection of plants gathered along the west coast and in the Canary Islands by H. H. McKinney, plant pathologist of the U. S. Department of Agriculture for a study of mosaic diseases of plants. Plant scientists are engaged in developing crops that are immune to these diseases, the most characteristic feature of which is the mosaic pattern caused by the green and yellow spotting of leaves of the diseased plants. They cause serious losses in the potato, tomato, sugar cane and tobacco, and, in some places, corn and wheat crops. The department of agriculture states that the virus is present in the juices of diseased plants and that it can be transmitted by insects in some cases, by contact in others and by contamination of the soil in others. The virus may remain active in dried specimens of certain plants for many years. It cannot be seen by the best microscope now available; Mr. McKinney, while on this trip, visited the laboratory of the medical research council in England to study the microscope developed by Barnard, which, by means of ultraviolet rays, metallic reflectors and quartz lenses, brings to view details of objects much smaller than those which are visible under the ordinary microscope.

Children Under Institutional Care.—The U. S. Department of Commerce has issued a report which appears complete for the first time in a single volume with statistics on dependent, neglected and delinquent children in the United States as of 1923, the latest federal census of children in institutions and foster homes. The report is arranged in three sections, the last one dealing primarily with inmates of institutions for juvenile delinquents obtained from 145 institutions receiving children on court commitment. It appears that there were, in 1923, 404,678 children in institutions or under supervision, the largest number being in institutions primarily for dependent children. There is an increasing tendency, it is said, toward placing dependent children in foster homes. However, 64.2 per cent of the children were found in institutions or receiving homes. The number of juvenile delinquents under 18 years of age admitted to institutions in the first six months of 1923 was 12,710. Of these 2,445 were committed to jails and workhouses, and 945 to prisons and reformatories. There has been a great change, the report adds, in the methods used in handling child delinquencies since 1910. A

much smaller proportion is committed to penal institutions for adults, and a greater proportion to special institutions for juvenile delinquents, such as industrial and reform schools. Only 54 per cent of the juvenile delinquents had been living under normal home conditions. The number of children leaving institutions during the first six months of 1923 was 10,032, 73.4 per cent of whom were paroled. Of those children who left penal institutions, only 20 per cent were paroled, and 46 per cent left because of expiration of sentence.

Renewal of Registration Under Harrison Narcotic Act.—Physicans who desire to continue to administer, dispense and prescribe narcotics must renew their registration under the Harrison Narcotic Act on or before June 30, paying the annual tax, $1. Failure to do so carries with it liability to criminal prosecution, and subjects the tardy registrant to a 25 per cent increase in the tax. Registration in class IV carries with it the right to administer, dispense and prescribe narcotics generally, but does not entitle the registrant to dispense the so-called exempt preparations. If the physician desires also to dispense such preparations he should register in class V as well as in class IV. Registration in class V is not required of physicians who prescribe only the so-called exempt preparations, but do not dispense them. No extra tax is collectable for the dual registration. If a physician limits his use of narcotics to the dispensing of so-called exempt preparations, he need register only in class V, in which case a tax of $1 must be paid. The exempt narcotic preparations include those that do not contain more than 2 grains of opium, or more than one-fourth grain of morphine, or more than one-eighth grain of heroin, or more than 1 grain of codeine, or any salt, or derivative of any of them in 1 fluidounce, or, if a solid or semisolid preparation, in 1 avoirdupois ounce; or to liniments, ointments, or other preparations which are prepared for external use, only, except liniments, ointments and other preparations which contain cocaine or any of its salts or alpha or beta eucaine or any of their salts or any synthetic substitute for them. These preparations in order to come within the exempt class must contain active medicinal drugs other than narcotics, and must be used as medicines and not for the purpose of evading the provisions of the act.

Airplanes and Ships in Flood Relief Work.—The old custom of relying on the army for stores in time of disaster was followed in the Mississippi flood. When the overflow began, April 4, the governors of Mississippi and Louisiana requested tents from the army for refugees; the supply forwarded was augmented again, April 19, by 1,000 tents from the army storehouse at St. Louis, by several hundred from the storehouses at Chicago and Fort McPherson, Georgia, and by 5,000 from the Philadelphia depot; 2,500 from Fort Omaha; three carloads of tent poles and pins from Philadelphia, and 204,000 tent pins from Columbus, Ohio. The War Department placed at the disposal of the Red Cross, April 22, 1,435 wall tents, 16,207 pyramidal tents; 11,102 cots, more than 27,000 blankets, and five hospital tents. The next day the Philadelphia depot sent 3,310 additional tents. A few days later, army ranges and cooks were sent to the camps, and government boats and barges began rescuing the inhabitants. By May 4 the army had seventeen airplanes photographing levees, locating marooned refugees, landing engineers, carrying messages and delivering emergent supplies. The navy sent its first seaplane to the flooded area, April 17, later sending thirty-six other planes which performed excellent service under adverse flying conditions. The navy also dispatched radio operators from Pensacola. A radiogram sent from Bruin, Ark., for example, to the Red Cross headquarters at Memphis, stated that an epidemic had occurred among the refugees and that no medical aid was available. Within an hour physicians had been transported to the camp and were administering to the sick. The navy contributed the ships, *Allegheny* and *Bagaduce*, from Key West, which transported supplies and refugees on the river while smaller craft were detailed elsewhere. The U. S. Treasury Department contributed every vessel of the coast guard fleet that could be used for rescue and relief in the flooded area; at the time of this report in the *Red Cross Courier*, the fleet comprised fifty power surf boats, twenty-two patrol boats, fourteen smaller craft, nine picket boats, four cutters and three harbor cutters, all manned by 603 officers and men. The coast guard force won much praise for their work.

Society News.—At the annual meeting of the Associated Anesthetists of the United States and Canada, Washington, D. C., May 16-17: Dr. John H. Evans, Buffalo, was made president; Dr. Ralph M. Waters, Madison, Wis., president-elect; Drs. Wilmer Baker, New Orleans, Harold A. Thompson, San Diego, Edward Leslie Burwell, New Rochelle, N. Y., and John A. Blezard, Edmonton, Canada, vice presidents, and Dr. F. H. Hoeffer McMechan, Avon Lake, Ohio, secretary. ——Dr. Samuel W. Welch, state health officer of Alabama, was elected president of the Conference of State and Provincial Health Authorities of North America at the recent annual meeting in Washington.——At the annual meeting of the American Neurological Association, May 26, Dr. Charles L. Dana, New York, was elected president; Drs. Bernard Sachs, New York, and Adolf Meyer, Baltimore, vice presidents, and Dr. Henry A. Riley, New York, secretary-treasurer. The next meeting will be held at Washington, in May, 1928. ——At the annual meeting of the American Urological Society, Baltimore, May 23-25, Dr. Richard F. O'Neil, Boston, became president of the society; Dr. Homer G. Hamer, Indianapolis, was made president-elect, and Dr. Alexander Randall, Philadelphia, was elected secretary. The next annual meeting will be in Chicago.——At the annual meeting of the American Climatological and Clinical Association, May 23-27, White Sulphur Springs, W. Va., the following officers were elected for the ensuing year: president, Dr. Joseph H. Pratt, Boston; vice presidents, Drs. James S. McLester, Birmingham, Ala., and George D. Porter, Toronto, Ont.; secretary-treasurer, Dr. Arthur K. Stone, Framingham Center, and recorder, Dr. Cleveland Floyd, Boston. The next meeting will be held at Washington, D. C., May 1-2, 1928. ——Dr. Sidney Yankauer, New York, was elected president of the American Bronchoscopic Society at the annual meeting, May 21, Atlantic City, N. J., and Dr. Louis H. Clerf, Philadelphia, secretary.——Dr. Joseph Brettauer, New York, was elected president of the American Gynecological Society at the annual meeting held in Hot Springs, Va., May 23-25, and Dr. Floyd E. Keene, Philadelphia, secretary. The next meeting will be held at Washington, D. C., April 30-May 2, 1928.——Dr. Adolf Meyer, Henry Phipps professor of psychiatry, Johns Hopkins University Medical Department, and director of the Phipps Psychiatric Clinic, Baltimore, was elected president of the American Psychiatric Association at the annual meeting in Cincinnati, June 3, and Dr. Earl D. Bond, Philadelphia, secretary. The next meeting will be held at Minneapolis in 1928.——Dr. G. Kirby Collier, Rochester, N. Y., was elected president of the National Association for the Study of Epilepsy at the annual meeting held, May 31-June 1, at Cincinnati, and Dr. Arthur L. Shaw, Utica, N. Y., secretary.——Dr. D. Bryson Delavan, New York, was elected president of the American Laryngological Association at the annual meeting, Atlantic City, May 23-25, and Dr. George M. Coates, Philadelphia, secretary.——The American Dietetic Association will hold its tenth annual meeting, October 17-19, at St. Louis, with headquarters at the Hotel Statler.

FOREIGN

World Population Conference.—The first World Population Conference will be held in the Salle Centrale, Geneva, Switzerland, August 31-September 2, to consider the question of population growth from an international point of view. Among the subjects to be discussed are population and the food supply; the biology of population growth; optimum density; the differential birth rate; migration and its control and fertility and sterility in relation to population. Sir Bernard Mallet is chairman of the council of the conference, which includes about twenty-four scientists of France, England and Germany, Australia, Holland, Switzerland and the United States, the members from the United States being Drs. William Whitridge Williams, Raymond Pearl, Wesley C. Mitchell, Clarence C. Little, Prof. Henry P. Fairchild and Prof. Edward M. East.

International Congress of History of Medicine.—The Sixth International Congress of the History of Medicine will be held at the University of Leiden, Amsterdam, July 18-23, under the patronage of the Prince of the Netherlands, and with a number of government officials as honorary presidents. There will be a visit to the exposition of physical instruments made by Dutch scientists in the eighteenth century, and moving picture illustrations of researches of Van Leeuwenhoek and Swammerdam; a visit to The Hague and Scheveningen; a reception by the Society of Physicians of The Hague, a visit to the medico-historic exposition of the Museum Suasso, and a reception by the mayors and municipaltities of Amsterdam and Leiden. Among the speakers will be Drs. Crommelin and Nuijens. Dr. J. G. De Lint is president of the executive committee.

Foreign Letters

LONDON

(From Our Regular Correspondent)

May 28, 1927.

New Coroner's Act: Important Changes to Come into Force

A new coroner's act makes several important changes. The appointment of county or borough coroners and of their deputies or assistant deputies is restricted to lawyers or physicians of not less than five years' standing. The right of a coroner to hold an inquest without a jury is maintained, but the cases in which a coroner must summon a jury have been extended to include infanticide, death caused by an accident, poisoning or disease, notice of which is required to be given to a government department or inspector or under any act; death resulting from a street accident caused by the use of a vehicle, and where death has occurred in such circumstances that their continuance or recurrence is prejudicial to public health or safety. The coroner may also summon a jury in other cases if he thinks it necessary He must still view the body, though the jury need not unless the coroner so directs or a majority of the jury desires to do so. Where a coroner is informed, before the jury has given its verdict, that some person is charged with the murder, manslaughter or infanticide of the dead person he shall, in the absence of reason to the contrary, adjourn the inquest until after the conclusion of the criminal proceedings and may discharge the jury If the coroner then resumes the adjourned inquest, no inquisition shall charge the accused person of any offense of which he could have been convicted on the indictment or contain any finding inconsistent with those proceedings. Where a coroner's inquisition charges a person with murder, manslaughter or infanticide the coroner has the same power as examining justices of committing that person for trial, but authority is given to the lord chancellor to make rules regulating the practice and procedure when persons are charged by a coroner's inquisition with those offenses. An important provision of the act is the power given to a coroner in certain cases to direct a physician to hold a necropsy if he thinks that such examination may prove an inquest to be unnecessary. The fees payable to a physician under the act are $7.50 for each day on which he is required to attend an inquest as a witness; $10 for making a necropsy; and for making that and attending to give evidence, $15 for the first day and $7.50 for each subsequent day of attendance.

Shall We Become Supermen?

In the *Evening News* Sir Arthur Keith, with all his usual force, lucidity and charm, discusses the fascinating question whether we shall become supermen. He first refers to the ample evidence of improvement in body and brain in the advance of man from apedom. But this advance has never continued along a straight, unbroken line; everywhere there are zigzags and breaks. As far back as we can go we find the world inhabited by different breeds of men, and in these breeds no two individuals are alike. Such differences and the zigzaggedness of the course makes it difficult to say whether mankind as a whole is progressing, unless one surveys long periods. It was toward the close of the ice age that men and women of our own kind first appeared in Europe. Many of the men were tall and large brained—as tall, strong, and well equipped in head and heart as any living race. But not all were tall and big-headed; many were the opposite; the women, in particular, were short of stature. The people of modern Europe are not superior to these early pioneers in strength of limb or innate capacity of mind. Keith recently had an opportunity of examining the skulls and skeletons of men and women who abode in Ur of the Chaldees long before the time of Abraham. The men were big-headed with robust faces; they were the founders of our earliest civilization—men of enterprise and erudition. Their descendants are wandering Arabs of the desert today. Five thousand years ago the Egyptians were building pyramids; in their governing and upper classes, as we know from examination of skulls, there were many fine men—men no whit behind the best we can show today, and better, Keith thinks, than can now be found in Egypt among their descendants. We do not know much concerning the cranial capacities of the ancient Greeks, but it is difficult to believe that the population of modern Greece has their equal. No one can survey collections of skulls that represent the upper classes of ancient Rome in her most prosperous periods without being impressed by the liberal lines on which nature had framed them. Modern Italy would be hard pressed to show their like.

One cannot study records of ancient Babylonia, Egypt, Greece and Rome without a note of alarm. Civilization seized them and sooner or later left them exhausted. And in these times civilization has spread into and seized the wide virgin field of western Europe, of which we form part. Will the fire of civilization consume us also? In our conception of empire Keith finds our chief hope. It gives scope for our energies. There is no sign of weakening anywhere. Our racial flag has been firmly planted on wide continental spaces; the United States Canada, South Africa, Australa, and New Zealand are held by men of the western European stock; British blood predominates. Our race establishes itself in the world more and more firmly; its prospects continue to improve; we increase rapidly in numbers, but do we improve in quality? Babylonia, Egypt, Greece and Rome did not fail for lack of children, but for a dearth of children of the right kind. Civilization exposes the ablest of her votaries to the temptation of luxury The basal and essential condition for racial progress is a healthy birth rate in every grade of the community As we raise our standard of living, the maintenance and education of children becomes more expensive; we become more and more tempted to spend on ourselves what should be sacrificed in raising another generation. The most alarming circumstance Keith sees today is the steady rise in the cost of "higher education." The pursuit of wealth and the ambition to climb the social ladder, although they serve as driving powers in every form of civilization do not tend toward racial betterment. Civilization is a winnowing process, and those who survive its ordeal are not our intellectuals and philosophers—our men of superior endowment—but the plain men imbued with the instincts of primitive humanity: a zest for life and for children. The right name for the tower of Babel is civilization; every attempt to build it has ended in the confusion of the builders. Can we, by taking thought, avoid former errors? Keith thinks we may, but the fact remains that there were as highly endowed men and women in the cities of the plain 6,000 years ago as there are in New York today.

Another aspect of the problem of human progress is of surpassing interest. Not many generations ago our forefathers were hunters and lived on what they could kill or gather. Today we have the produce of the world at our disposal and most of us can afford to eat to repletion. Earlier generations lived half naked in the open; we clothe our bodies and live in warm houses We are passing through a great experiment: how will our bodies emerge from it? Disorders of digestion are rife appendicitis becomes alarmingly prevalent; our teeth tend to erupt in a disorderly fashion and are prone to disease, and we become more and more rabbit-mouthed. In the inhabitants of England in former times,

caries of the teeth and contractions of the palate hardly occurred until the eighteenth century and then they are found plentifully in the skulls. There is evidence of other physical changes. We cannot say that as a people we are growing stronger, taller or bigger brained. Our modern ways of living are having an effect on our constitution, but Keith sees no reason to fear these changes. As our knowledge of the human body increases we shall learn how to avoid them. Some think that man has reached the highest point of evolution and that he has become a fixed and stable type. But nothing can live and be stable; change may be exceedingly slow, but it is inevitable. Man cannot escape from this universal law; he must change, for better or for worse. In the world today we see changes proceeding apace; some races are dying out, others are taking their place. One would like to think that "every day, in every way" we are getting better and better. Our ideals are higher. Our opportunities of living life to the full continue to improve. But we cannot claim to be physically better or higher than the men who founded civilization 6,000 years ago. However, when we go back further and see man emerge from a form little higher than an ape and reach his present estate, the hope wells up that in some way we may yet circumvent the limitations of civilization and rise to the status of superhumanity.

Women Liberals Favor Birth Control

The question of birth control was discussed at the annual council meetings of the Women's National Liberal Federation. A motion in the name of Mrs. Spring Rice declared that a national policy on such matters as emigration and birth control was urgently required, and stated that "while emigration can be only a temporary cure for overpopulation and, by its process of selection, may be a danger to the country, scientific birth control provides a means of increasing the efficiency of the nation." Mrs. Spring Rice said that the time had come when liberalism should bring into its political thought two grave questions which had a profound effect on the population of the country. It was not for the good of the empire that we should send our best young men and women to the dominions. As to birth control, she wanted it to be associated not with the limitation of families so much as with the improvement of families. Lady Acland, seconding, said that the resolution was a call from the womanhood of the land to the nation to formulate a policy about the ever-present question of population. We were bringing down the death rate and were asking at the same time for a more responsible parenthood. There were persons who were shocked that mothers should be able to choose how many children should be brought into the world. We could leave that to the generation that looked on population as cannon fodder. There was no doubt that the great majority of married women did, in some form or other, practice birth control, but owing to lack of knowledge it was not the most rational form. Mrs. Walter Runciman moved as an amendment that "inasmuch as there is no general consensus of scientific opinion on the subject of birth control and the question has given rise to deep-rooted differences of opinion on social, moral and religious grounds, it is undesirable to include a pronouncement on the subject in the policy of this council." The amendment was defeated and the resolution adopted. The conference then adopted a resolution, moved by Lady Howarth and seconded by Mrs. N. Barclay, that information should be available to those who asked for it at the centers controlled by the ministry of health, where the physicians were in possession of the medical history of the mothers and knew to whom such information should be given, "by this means enabling the poorest members of the community to obtain information to which the wealthier classes already have access."

PARIS

(From Our Regular Correspondent)

May 18, 1927.

The Diagnosis of Tuberculosis

Professor Bard, following the congress held in Lyons, has published an outline of the question of diagnosis of pulmonary tuberculosis. Two contrary tendencies may be noted. Physicians for sanatoriums, insurance companies or military recruiting are bent on not letting any suspect escape who might benefit by early treatment or who might later develop the disease and reflect on their diagnostic skill. Therefore, many persons are declared suspects who are not tuberculous and never will be, or who are carriers of bacilli that will always remain latent. France pays, every year, immense sums, in the form of pensions, to ex-service men declared "suspects" by examining boards but who are today in excellent health, having given only vague signs of pulmonary sclerosis on fluoroscopy. The pension law declares that a pension right once acquired shall be retained irrespective of later developments. The societies of pensioned soldiers now play an important political rôle in the parliamentary elections. On the other hand, physicians in hospitals and dispensaries, having had their attention directed to the large number of persons previously declared "suspected" who never develop tuberculosis, are now inclined to refuse to accept a diagnosis of tuberculosis except on explicit proof, which is frequently unobtainable. They hesitate to apply isolation, the loss of employment, and the consequent renunciation of future prospects, to all subjects officially recognized as tuberculous. Bard, in concluding, takes frankly the part of the latter.

The Hygienic Service and the Public Health Service in Morocco

The organization in Morocco of the hygienic service and of the public health service, in their present form, is of recent origin. In March, 1926, Dr. Colombani was appointed general director, with full power and a centralization of all the services in his hands. This concentration of authority in a single man is the principle that constitutes not only the newness but also the efficacy of Moroccan organization. Efforts are directed toward supplying medical aid for both Europeans and natives, toward the organization of general hygiene, prophylaxis on a large scale, and the hygienic education of Europeans and natives. There have been built five large European hospitals, nine regional hospitals for both Europeans and natives, 130 infirmaries for the natives, and maternity hospitals, some for Europeans and others for natives. Furthermore, a colonial medical service makes it possible to give to the colonists (even those living most remote from the centers) and to their families the necessary medical aid. The supervision of hygiene and the general prophylaxis of epidemic diseases is accomplished in the cities through the hygienic bureaus, of which there are at present eleven. The *"groupes sanitaires mobiles"* are the distinctive and original feature. They not merely constitute a mobile dispensary for consultation, but on the outbreak of an epidemic, they can be enlarged to form an organization for prophylactic defense. Particular attention is paid to the prophylaxis of plague, typhoid, smallpox, syphilis, tuberculosis, trachoma and malaria. Antisyphilitic dispensaries have been established in all the important cities, and arsphenamine treatment is actively propagated among all groups of natives. In order that the native population may understand the importance of the measures imposed on them and the value of the care and treatment offered them, the physicians constituting the mobile sanitary groups all speak the language of the country and act as instructors. In addition, a Mussulman who has studied in France is employed to make the rounds of the cities and rural communities and to

give talks on hygienic and health topics. Parallel with that, a publicity campaign is conducted with a view to instructing the European colonists.

The Sterilization of Drinking Water by Electricity

The sterilization of drinking water by electrical procedures is coming more and more into use in France and may become the predominant method, especially where waterfalls make cheap electric power available. The construction and maintenance of aqueducts from new sources of water located at long distances is becoming increasingly expensive. The region of Nice and the Riviéra is supplied today almost entirely with water thus sterilized, and many other cities are adopting the method. Avignon, which, formerly, after every high water on the Rhone, experienced an epidemic of typhoid, has introduced the system and there has not been a case of typhoid since that time. Dinard, a region of Bretagne in which infection has been common, and Soulac, on the coast of Gascony, have done the same. Lorient, a fishing port, after suffering several outbreaks of typhoid, is now sterilizing with ozone the waters of the Scorff and the Scave. Auray consumes the muddy and contaminated waters of the Trégurey river after being purified and clarified by means of ozone. Especially the cities frequented by French and foreign tourists have been the first to adopt the system, in order to prevent the spread of reports unfavorable to their business; also cities having large military garrisons, which, as is well known, constitute a favorable environment for epidemics. Brest, Toulon, Saint-Brieuc, Paramé, Saint-Servan, Dinan, Avranches, Angoulême, Cognac, Granville, Chatellerault, Laval, and many cities of the lower Seine, are now supplied exclusively with ozonized water, as a consequence of which their sanitary condition improved at once. From calculations made it appears that the cost of the process ranges, according to the place, between 1 and 2 centimes per cubic meter of water, and in some instances in which the sources of the electricity are near at hand and a proportionate low rate prevails the cost has been brought considerably below 1 centime per cubic meter. The city of Paris is studying the question of cost at present with a view to introducing the system if feasible.

BERLIN

(From Our Regular Correspondent)

May 21, 1927.

Congress of the German Society of Internal Medicine

The congress of the Deutsche Gesellschaft für innere Medizin was held at Wiesbaden, April 25-28, 1927. The first day of the congress, which was presided over by Professor Naegeli of Zurich, was devoted to psychotherapy. The principal paper was presented by Gaupp of Tübingen. He emphasized in psychotherapy the value of the unity of the body and the psyche, and the significance of psychologic research for the field of medicine. Psychotherapy is an ancient mode of treatment. As a special science, however, which passes from intuition to conscious endeavor, it is new. Psychic impairment and disturbed bodily function may be in close mutual relation. The effects of pathologic psychic processes, which are often only accentuations of normal processes, on body and mind may be referred to as psychogenic. In a special state of consciousness such as hypnosis, the action of the psyche affects the body more deeply than does the will when consciousness is clear and unimpaired. For example, in a hypnotic state, symptoms the cause of which is not clear may be relieved if the patient recalls the events that produced them in the first instance. Hypnosis has been supplanted by the introduction of Freud's psychanalysis, in which the central idea is the conception of the effect on the waking ego of perceptions and feelings that have been banished, by an effort, from consciousness. At first Freud thought that in the sexual injuries of childhood he had discovered the sole cause of neuroses. Later, he laid the chief emphasis on an abnormal sexual constitution. The ideas associated with this conception (Oedipus complex, suppression, etc.) and the resolution and elimination of the complexes through the psychanalysis of perceptions of which the subject was previously unconscious are well known. The author called attention to the fact that the accentuation of sexual ideas (sexualism) has elements of danger for the patient. Some of Freud's pupils are departing from the teachings of the master. Jung amplifies the notion of the libido into the conception of the psychic productive power. Steckel varies the form of treatment and recommends what he terms a *"schnellanalyse,"* or quick analysis. Ludwig Frank and others have clung to the old method of 'psychocatharsis." Alfred Adler, plainly under the influence of Hobbes and Nietzsche, develops the theory of the origin of neuroses through the conflict between a dominant will and an inferiority complex that is based on congenital or acquired organic defects. From such conflict there results for every neurotic the chief guiding motive of his life, and the neurosis becomes for the patient a mere escape symptom. Freud and Adler as well trace every neurosis back to early experiences in childhood. They both make the mistake of allowing themselves to make dogmatic generalizations on the basis of single observations, valuable though they may be. Experience teaches that the majority of neurotic patients cannot be cured by analysis and enlightenment alone. In addition to the analysis of the personality, recourse may be had to "psychagogics," whereby the patient is led to set a worthwhile goal for himself in life. In that connection, the development of group consciousness is essential. The simpler forms of neurotic disorders can be improved or cured by various methods of suggestive treatment. Often, however, a cure is impossible, owing to inborn pathologic dispositions, so that a neurosis may be the relatively best escape from a sad but unavoidable life situation. Hypnosis has lost its significance because recurrences are frequent. The author gave a survey of the other forms of suggestive treatment, and discussed the injuries to which patients were exposed by wrong methods of psychotherapy. He explained also the demands made by psychanalysts with respect to the training of psychotherapists. Gaupp stated further that the observations of the recent war furnish evidence that not all neuroses are traceable to childhood experiences. As supplementary to the analysis of personality, he emphasizes the value of "therapeutic pedagogics" and insistance on ethical teachings; more particularly, the overcoming of selfishness. In closing, he raised the question as to whether psychotherapy was applicable to a group of persons, to certain strata of the population, or even to a whole people, and, in that connection, called attention to the deep effects that the psychic derangements of the war and the weakening of religious ties had had on the population. However, a detailed knowledge of the individual psyche constitutes the basis for a knowledge of the group, and it is very evidently the duty of the physician to minister, in all wisdom and kindness, to the needs and sufferings of individuals. (An almost complete reprint of Gaupp's paper will be found in the *Deutsche medizinische Wochenschrift* **53**:807 [May 6] 1927.)

According to Fleischmann of Nassau, psychotherapy covers more than treatment by means of psychanalysis. The preconditions for psychotherapeutic intervention are a careful examination of the patient and certainty of diagnosis, which many psychotherapists make the mistake of regarding as of secondary importance. Psychotherapeutic methods may be divided into two distinct classes, the secret primitive unsystematic procedures and the systematic modes of operation; some are lacking a theoretical basis, as hypnosis, suggestion, "psychagogics" and "therapeutic pedagogics," while

psychanalysis and Adler's *"individualpsychologie"* have a theoretical substratum. The successful results secured with psychanalysis are probably referable to their suggestive effect, for which reason it is recommended as a "rational anamnesis," which helps the patient to understand the connections in the development of his disorder and stimulates him to active cooperation in overcoming it. The dangers in the practical application of psychanalysis are associated with the facts that things of which the patient is blissfully unconscious are sometimes brought into the foreground of consciousness in such a manner as to work a positive injury to the patient and that the sexual factor often receives undue emphasis. Then, too, the interplay of emotions as between the physician and the patient has its dangers. The physician who applies psychanalytic treatment must remain conscious of the fact that in very few cases does he effect a causal cure. He can, however, if he retains a clear conception of a feasible objective, achieve good results in many cases of practical medicine and thus find psychotherapy a valuable aid in the treatment of bodily disease as well.

During the discussion that followed, Römheld (Hornegg o. N.) dealt with psychotherapy as applied to internal diseases. He employs a method that he has found useful in many cases. It consists in endeavoring to direct a patient's attention away from the organ or organs that are diseased to another organ that is not diseased.

(To be continued)

BUCHAREST

(From Our Regular Correspondent)

May 5, 1927.

Eight Hundred and Sixty-Six Abortions Performed by a Bessarabian Physician

The director of the state hospital in Kishenew, the capital of Bessarabia, was struck by the great number of women admitted to the gynecologic section of the hospital, with conditions pointing to preceding abortion. He asked the police to investigate, and the result was the revelation that apparently Dr. Stephan Bolinsky, a physician in Lapusna, has performed criminal abortion in a commercialistic manner. His house has been searched and secret records point to the implication that he performed criminal abortion in 866 instances. Almost all his instruments consisted of those necessary to the performance of abortion. In his office were many embryos kept in alcohol and in the cellar were found a great quantity of small bones which seem to have been derived from embryos. The physician, his midwife and his nurse have all been arrested. The disclosure has aroused surprise in medical circles since Dr. Bolinsky was known as a good gynecologist, who pursued his specialty in a scientific manner, having written many valuable articles on gynecologic subjects. He denies the crime imputed to him and states that the bones in the cellar are of dogs. The county court in Lapusna will try the case in June, and more than 200 witnesses and five medical experts have been summoned for the trial.

Bill Relating to Venereal Diseases

The Roumanian government has sent out a special committee to study the fight against venereal diseases in different nations of western Europe. The committee spent several weeks in Vienna, Berlin, Paris and London, and its experiences are embodied in a new bill. In drafting the bill an endeavor was made to copy the German system, which is most suitable for Roumanian conditions. According to the bill it is the right and duty of every infected person to have himself treated. His right to treatment he may realize in the dispensaries of the national sickness insurance organization. His duty to have himself treated may be enforced by law. He must be treated by a qualified physician, or if it is suspected that he has a venereal disease and that he is disseminating it, the local health magistrate may demand a medical certificate of his condition, or may subject him to an examination made by an official physician. Furthermore, a patient with venereal disease must be informed that he is suffering from a contagious malady, and to this end every physician is obliged to give an explanatory leaflet to all his patients who are commencing a course of antivenereal treatment. It was suggested also that cured patients should be given a leaflet instructing them how to protect themselves against a fresh infection. This system proved efficacious in Sweden. Treating patients by correspondence is forbidden. The bill prescribes punishment for those who knowingly have their syphilitic babies nursed by a healthy woman. The bill contains a paragraph according to which physicians are obliged to report to the nearest venereal station their patients who refuse to undergo treatment. In case of continued delinquency the station must report the patient to the health magistrate. The bill dropped compulsory notification of the names of patients with venereal disease. The opponents of reporting the names of patients argued that this would bear hardest on those who were willing to have themselves treated conscientiously, and would deter many patients from calling on physicians.

History of Public Health Administration in Roumania

At a recent meeting of the medical association Dr. N. N. Saveanu, late minister of health, gave a little sketch of the history of public health administration. He said that the first public health institutions were the cloisters. Some records, dating back to the sixteenth century, state that sufferers have sought relief for their bodily and mental disorders in the cloisters of the monks. This primitive arrangement was perfected at about the beginning of the nineteenth century. The real basis for public health organization was laid, however, as late as 1874, by the so-called Davila law. Under this the first public health law of Roumania, the physician is subordinate to the county prefect and city mayor. The appointment and dismissal of physicians at this time was the discretional right of the county and city councils. The new law of 1881, as a proof that it regarded the sanitation of rural districts as of equal importance with that of the city, transformed the old cloisters into hospitals and employed monks and nuns as nurses. The law of 1885 released physicians from local authority and enacted that they shall be appointed by the minister of internal affairs under royal decree.

With regard to the fact that the overwhelming majority of the Roumanian population are village dwellers, the government promoted the sanitation of rural districts by new laws in 1893, 1898 and 1906. In 1906, thirty-two village hospitals were erected and a new law was enacted that all hospitals should be managed by the state. All health districts were obliged to erect central hospitals. Nov. 4, 1923, a great step was taken in the progress of sanitation, the ministry of health being established.

The Obligation of Producing Medical License to Marriage

The provincial council in Zagreb, the capital of Croatia, a province of Jugoslavia, has passed a law which requires that every man who is to be married must be examined by a medical officer. The man must be of mature age and shall not suffer from tuberculosis, venereal disease, trachoma or malaria. No priest or clergyman is allowed to perform the ceremony for parties who fail to produce such certificates. In case a medical officer diagnoses a disease that may interfere with married life or may be detrimental to the offspring, he is obliged to call the attention of the parties to this fact and take up the matter with the provincial council. Both health officer and priest are responsible for observance of this law.

Marriages

FRANK W. MILWARD, JR., Cleveland Heights, Ohio, to Miss Norma Christine Koch of Lakewood, June 15.

VIRGIL LEROY PAYNE, Greenville, Miss., to Miss Ella Hunt Howell of Pine Bluff, Ark., April 19.

ZENO NICHOLAS KORTH, Rochester, Minn., to Miss Agnes Morton of Omaha, May 18.

LEO H. SALVATI, Westfield, N. J., to Miss Doris Lambrusken of Somerville, June 1.

LOUIS COHEN to Miss Eleanor Speiser, both of Philadelphia, June 1.

Deaths

Ralph Wentworth Jackson ✠ Boston; Long Island College Hospital, Brooklyn, 1892; member and past president of the American Proctologic Society; for three years on the executive committee and chairman of the Section on Gastro-Enterology and Proctology of the American Medical Association, 1924-1925; on the staffs of the Fall River General Hospital and the Union Hospital, Fall River, St. Luke's Hospital, New Bedford, Mass., and the Carney Hospital, Boston; aged 58; died, May 22, at the Garfield Memorial Hospital, Washington, D. C., of acute dilatation of the heart.

Charles Teackle Carter Buckner ✠ Captain, M. C., U. S. Army, Fairfield, Ohio; University of Maryland School of Medicine, Baltimore, 1899; commissioned a captain in 1920; served during the World War; aged 49; died, February 19, at Selma, Ala., of skull fracture received in an airplane crash.

Robert William Eaton, Phoenix, Ariz.; Northwestern University Medical School, Chicago, 1915; member of the Arizona State Medical Association; served during the World War; on the staff of St. Joseph's Hospital; aged 36; died, May 6, as the result of burns received in an explosion.

James Elmo Smith ✠ Saint Jo, Texas; University of the South Medical Department, Sewanee, 1908; member of the Oklahoma State Medical Association; aged 43; died, in May, at a hospital in Gainesville, of injuries received in an automobile accident.

James Hamilton Maxwell, Oklahoma City, Okla.; Memphis (Tenn.) Hospital Medical College, 1901; University of Louisville School of Medicine, 1903; member of the Oklahoma State Medical Association; aged 53; died, May 5, of acute nephritis.

Charles Cornelius Shope, Des Moines; Drake University College of Medicine, Des Moines, 1894; member of the Iowa State Medical Society; formerly a druggist; on the staff of the Lutheran Hospital; aged 61; died, March 30, of cerebral hemorrhage.

Frederick Augustus Grazer, Sacramento, Calif.; Cooper Medical College, San Francisco, 1889; member of the California Medical Association; for sixteen years pharmacist to the Sacramento Hospital; aged 70; died, recently, of pneumonia.

Aaron Schloss, San Francisco; University of Pennsylvania School of Medicine, Philadelphia, 1883; member of the California Medical Association; aged 65; died, April 30, at his home in Berkeley, Calif., of uremia.

Thomas Hicks Pleasants ✠ Lewistown, Mont.; Medical College of Virginia, Richmond, 1877; city health officer; past president of the Fergus County Medical Society; aged 70; died, May 16, of pneumonia.

T. E. Pennington, Naylor, Ga.; Atlanta Medical College, 1886; member of the Medical Association of Georgia; aged 70; died, May 9, at a hospital in Valdosta, of cerebral hemorrhage.

Horace Morton Leach, Rochdale, Mass.; Hospital College of Medicine, Louisville, Ky., 1876; member of the Massachusetts Medical Society; aged 83; died, May 11, of myocarditis.

William B. St. John, Bristol, Tenn.; Hospital College of Medicine, Medical Department Central University of Kentucky, Louisville, 1886; aged 61; died, May 12, of heart disease.

Paul Ralph Sigel, Detroit; Detroit College of Medicine and Surgery, 1913; aged 37; died, March 15, of cerebral hemorrhage and skull fracture received when he fell down stairs.

Lorenzo Miller Nickerson ✠ Remsenburg, N. Y.; Columbia University College of Physicians and Surgeons, New York, 1896; aged 57; died, May 21, of carcinoma of the bladder.

Nathaniel McClinton, Jensen, Fla.; Victoria University Medical Department, Toronto, Ont., Canada, 1865; aged 90; died, May 22, at Saginaw, Mich., of chronic myocarditis.

William Howard Gallagher, Boston; Harvard University Medical School, Boston, 1896; member of the Massachusetts Medical Society; aged 52; died, May 11, of myocarditis.

Louis W. Toles ✠ Orlando, Fla.; Rush Medical College, Chicago, 1897; aged 64; died, May 4, at the Orange General Hospital, of uremia and chronic nephritis.

Adolph Jaenicke, Clinton, Iowa; University of Würzburg, Germany, 1879; member of the Iowa State Medical Society; aged 72; died, May 19, of angina pectoris.

Thomas J. MacFarlane, Brooklyn; Medical Department of Columbia College, New York, 1886; aged 61; was found dead in bed, May 20, of cerebral hemorrhage.

Luke Edward Bartley, Providence, R. I.; Medical Department of the University of the City of New York, 1891; aged 62; died, May 16, of heart disease.

Rose Kidd Beere, Washington, D. C.; Northwestern University Woman's Medical School, Chicago, 1892; aged 68; died, May 19, of chronic myocarditis.

Joseph Herbert Robison, Bradford, Pa.; University of Buffalo (N. Y.) School of Medicine, 1895; aged 55; died, May 16, of carcinoma of the throat.

Simon Bothwell Fraser, New York; McGill University Faculty of Medicine, Montreal, Que., 1907; aged 47; died, May 19, of cerebral hemorrhage.

William T. Medling, Dyer, Tenn.; University of Nashville Medical Department, 1874; aged 77; died, March 28, of arteriosclerosis and myocarditis.

John William McKoan, Worcester, Mass.; Harvard University Medical School, Boston, 1894; aged 53; died, May 4, of acute dilatation of the heart.

Jennie Garrison Ghrist ✠ Los Angeles; Keokuk (Iowa) Medical College, 1898; aged 57; died, May 5, at her home in Glendale, Calif., of carcinoma.

George W. Suddard, Hayti, S. D.; Bennett Medical College, Chicago, 1906; aged 61; died, April 29, of injuries received in an automobile accident.

Benjamin F. Phillips, Baltimore; University of Maryland School of Medicine, Baltimore, 1878; aged 72; died, May 25, of heart disease.

Alpheus W. Gregg, Kennett Square, Pa.; Hahnemann Medical College and Hospital of Philadelphia, 1889; aged 60; died, March 9.

James H. Chipman, Georgetown, Del.; Medico-Chirurgical College of Philadelphia, 1898; aged 48; died, May 9, at a local hospital.

Moses E. McCray, New Albany, Kan.; American Medical College, St. Louis, 1880; died, May 7, at a hospital in Kansas City, Mo.

Reine Keelor Hartzell, Oakland, Calif.; Jefferson Medical College of Philadelphia, 1902; aged 47; died in May, at Los Angeles.

Alfred B. Hart ✠ Owatonna, Minn.; University of Minnesota Medical School, Minneapolis, 1903; aged 58; died, May 10.

Hubert A. Pinault, St. Joseph, Minn.; Laval University Faculty of Medicine, Montreal, Que., 1883; aged 72; died, May 21.

Emil J. Merki, Chicago; University of Illinois College of Medicine, Chicago, 1902; aged 49; died, May 24, of Hodgkin's disease.

Frank T. Turner, White Hall, Md.; College of Physicians and Surgeons, Baltimore, 1879; aged 69; died, April 30.

Charles Clifton Wells, Darbun, Miss.; Memphis (Tenn.) Hospital Medical College, 1908; aged 46; died, May 8.

James N. Montgomery ✠ Chicago; Missouri Medical College, St. Louis, 1875; aged 77; died, May 22, of myocarditis.

Porter K. Dobyns, Franklin, Ind.; Medical College of Indiana, Indianapolis, 1879; aged 68; died recently.

Pleasant M. Hawkins, Arp, Texas (licensed, Texas, under the Act of 1907); aged 70; died, March 21.

The Propaganda for Reform

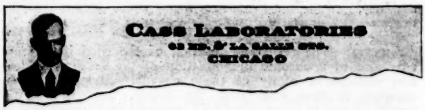
IN THIS DEPARTMENT APPEAR REPORTS OF THE JOURNAL'S BUREAU OF INVESTIGATION, OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER GENERAL MATERIAL OF AN INFORMATIVE NATURE

THE "CASS TREATMENT" TRICKERY

In this department of THE JOURNAL, Jan. 15, 1927, under the title "Cass Treatment for Rheumatism," there was described a particularly bold piece of Chicago mail-order quackery, conducted under the name "Cass Laboratories." In this article it was shown that there was a close community of interest between this humbug and a fake "epilepsy cure," exploited under the trade names "Western Medical Association" and "Vernon Laboratories."

The article brought out the fact that the Cass Laboratories were not laboratories; that its alleged president, "Harvey L. Cass," who was featured throughout the advertising, did not exist but that the concern was run by one H. L. Cassel, in association with his brother-in-law, one Joseph V. Creevy.

In the Cass Laboratories' advertising, the mythical H. L. Cass was played up as a human interest element, his picture appearing on most of the stationery and other advertising paraphernalia. Cassel even went so far as to publish a photograph of three small children—"Tom, Bob and Dick"—said to be the children of H. L. Cass. Even a "Mrs. Cass" was dragged into this crude quack hunt for victims.



To avoid the issuance of a fraud order debarring from the United States mails the quackery exploited under the name "Cass Laboratories," H. L. Cassel, the head quack of the concern, sent in a sworn statement to the government that the "Cass Laboratories" had "been discontinued and abandoned" and would not be resumed. The same quackery is now being conducted under the name "H. L. Cass Corporation," a change of name but not of business that was effected at least a month before Cassel sent in his affidavit.

THE JOURNAL article described in detail the misleading and quackish character of the claims made for the alleged treatment, and published the analysis made of the nostrum by the A. M. A. Chemical Laboratory. The "treatment" consisted of baking soda tablets, of other tablets containing aspirin and cinchophen, and of some flavored epsom salt.

In October, 1926, the Post Office Department called on the Cass Laboratories to show cause why a fraud order should not be issued against it. Toward the end of February, 1927, Cassel submitted an affidavit to the Post Office Department, declaring that he was authorized and empowered to execute it on behalf of the Cass Laboratories, and swearing:

"That the business heretofore conducted under the name Cass Laboratories has been discontinued and abandoned and will not be resumed at any time in the future."

The facts were, that for a month or more before Cassel made this sworn statement, the name "Cass Laboratories" had been abandoned and the rheumatic public was receiving the same line of quackery sent out under a new trade name: "H. L. Cass Corporation."

It is to be hoped that when the Post Office Department gets around to these quacks again that it will appraise the oath of this concern at its obvious value and issue a fraud order not only against the company itself, but against the individuals who are conducting it.

Correspondence

INJECTION TREATMENT OF VARICOSE VEINS

To the Editor:—I was much interested in the editorial (THE JOURNAL, May 14, p. 1571), on "The Injection Treatment of Varicose Veins," which reported Lomholt's fatal case of pulmonary embolism. I have successfully treated more than a hundred patients by the injection method in the last five years, and have always assumed that embolism was a mechanical impossibility in these cases on account of the extreme toughness and firm adherence of the chemically induced thrombi.

The extreme degree and persistence of the acute inflammatory reaction in the injected veins in Lomholt's case suggests that the thrombi had become infected by pyogenic bacteria in the blood stream, perhaps from abscessed teeth or other foci. I have always insisted on the eradication of all foci of infection before injecting any varicose veins, and my occasional neglect of this precaution has usually been followed by a severe inflammatory reaction. Possibly, Lomholt followed the recent pernicious advice of Linser of Tübingen, who stated that the 20 per cent sodium chloride solution need not be boiled, "as it is self-sterilizing." I tried this once, got an infected thrombus, and have boiled my solution ever since. Finally, it is obvious from the data given that Lomholt's patient had a chronic myocarditis and developed auricular fibrillation. As pulmonary embolism is a fairly common complication of auricular fibrillation, and an excessively rare complication (according to the literature) of the injection treatment of varicose veins, it seems at least plausible to me that the embolus in this case came from the right auricular appendage rather than from the obliterated and firmly contracted long saphenous vein. It is unfortunate that there was no autopsy to settle this point. In any case, this experience of Lomholt is no argument against an excellent therapeutic procedure, as embolism has been reported several times following varicotomy, the embolus coming from the ligated proximal stump of the long saphenous vein.

HERMANN SCHUSSLER, JR., M.D., San Francisco.

A PIONEER PRECEPTOR

To the Editor:—In his paper on surgical progress, Kanavel mentions Parkes as the preceptor of Albert J. Ochsner. Dr. Ochsner had another preceptor who influenced him to take one of the most important steps of his career. When he was a young man teaching school at Ironton, Wis., saving a few hundred dollars that he might proceed directly to medical college, he was blessed with the friendship of E. J. Lewis, the village doctor Dr. Lewis instructed the young man in anatomy and physiology and prevailed on him to enter the state university, where, in due time, he received the bachelor's degree in science. Dr. Lewis, himself a man of culture and descended through generations of a Connecticut family with root stock in Wales, was one of the men who thus early knew that success in medical work would increasingly require a higher degree of preliminary education. Without his influence, the work of Ochsner could not have been so fruitful.

Dr. Lewis, who was the father of the novelist Sinclair Lewis, removed to Sauk Center, Minn., where he continued practice to the time of his death last August. His friendship with Ochsner was continuous.

His home in Sauk Center was a center of culture, where many young physicians received helpful hospitality. He was one of the unostentatious lights, who point the way, where well known lights shine not.

S. H. CORRIGAN, M.D., Lampman, Sask

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

ECZEMA OF HANDS AND FEET

To the Editor:—I have a patient suffering with a moist eczematoid condition of the skin of the hands and feet. This occurs annually about this time of the year and the warmer months of summer. It is exceedingly moist, saturating his stocking in a very short time. It progresses peripherally and has dry scaly margins. He has been to several dermatologists without any immediate relief, and then takes up home treatment with petrolatum or epsom salt solutions, which seem to effect a cure. I have had scrapings examined and have obtained a heavy growth of yeast. No other organisms have been found so far after two weeks' culture. The textbooks do not seem to offer any treatment. Can you suggest a course of treatment I might try? Please omit my name.

M.D., Philadelphia.

ANSWER.—Many of these cases of eczema of the hands and feet are ringworm infection. A very few are due to yeast. These ringworm (tineal) eczemas of the hands and feet are the commonest affections of these parts that the dermatologist sees. The condition is described in the works on dermatology under ringworm of the hands and feet, eczematoid ringworm, epidermophythosis, tineal dermatitis. It is only within recent years, however, that the very common rôle of tineas in causing eczema of these parts has been recognized.

In the acute cases wet dressings of aluminum acetate solution of the following formula is one of the best applications:

8 per cent aluminum acetate solution	30 cc.
Water to make	500 cc.

Use this as much as possible, and, in the intervals when this cannot be used, keep the parts greased with a bland ointment such as cold cream. When the condition is subacute, antiseptics are indicated. Tincture of iodine from a strength of 2 per cent up to full strength (10 per cent) is one of the best applications. Various special mercurial antiseptic solutions are useful. One of the favorite applications is Whitfield's ointment.

Salicylic acid	6 per cent
Benzoic acid	12 per cent
Petrolatum sufficient to make	100 per cent

This must be diluted to one-third or one-half strength in using at the start.

The foregoing suggestions indicate the line of treatment. More detailed treatment can be found in any of the recent works on dermatology.

THICKENED NAIL

To the Editor:—I have a patient who has a thickened and painful toe nail. The nail is too hard and thick to be cut off. Can you suggest anything that can be put on that will destroy the nail?

P. STAPPENBECK, M.D., Brock, Neb.

ANSWER.—The best treatment would be the removal of the entire nail and the destruction of the matrix. Chemical destruction is a dangerous procedure.

TREATMENT OF AURICULAR FIBRILLATION

To the Editor:—What is the prognosis as to life and work of a patient who has had auricular fibrillation for five years but who has obtained normal cardiac rhythm under quinidine sulphate? Would it be advisable for him to have sexual intercourse or attend moving picture shows, ball games and the like? How long should he be kept on this medication? Please omit name.

M.D., N. Y.

ANSWER.—An opinion as to prognosis cannot be based on the presence or absence of auricular fibrillation. The prognosis depends:

1. Above all other considerations, on the presence or absence of an active infection involving the heart itself. This might be an endocarditis so mild as to give slight symptoms but constantly doing progressive harm.

2. If such infection is not present, on the recurrence with consequent further harm. A heart previously infected is predisposed to such infection.

3. On the amount of anatomic change already present and whether it is sufficient to impair the function of the heart, and if it is, to what extent the function is impaired.

4. To a relatively small extent on occupation and mode of life.

The presence or absence of auricular fibrillation is little of a determining factor in the prognosis except that the presence of auricular fibrillation usually indicates some amount of injury to the heart. Auricular fibrillation is not a great mechanical disadvantage, provided the rate is not too rapid or that it is controlled by digitalis. A patient with an otherwise competent heart, when anatomic changes in the valves or muscles have not progressed too far and with no active infection present, can go through life comfortably and indefinitely with an auricular fibrillation.

The question as to the mode of life and amount of exercise depends so closely on the factors mentioned that the decision in this particular case must be left to the judgment of the correspondent. In general, severe exertion would tend to cause auricular fibrillation to recur and his activities should be increased gradually if it is thought best to increase them. If he has gone five years without recurrence, the quinidine could certainly be stopped, and in the absence of any evidence of infection his activity could be gradually increased, the amount of increase depending on his response.

RECURRENT SWELLING OF SPERMATIC CORD

To the Editor:—I have a patient in whom swelling of the spermatic cord from the testes up as far as it can be felt, and presumably the seminal vesicles, occurs gradually for about seven days after sexual intercourse. Just after intercourse the swelling entirely disappears along with the pain, which is, no doubt, due to the tension. At the seventh day the swelling is quite prominent on both sides. There is no varicocele. The patient had an operation on the left side two years ago for hernia, but the swelling has been taking place for four years. He had syphilis about twenty years ago; subsequent Wassermann reactions, the last one two years ago, were negative. He never had gonorrhea. There is a mild prostatitis, with pus cells but without organisms. I have been giving diathermy, massages and irrigations. Kindly advise probable cause and treatment. Please omit my name.

M.D., Louisiana.

ANSWER.—The recurrent swelling of the cord is undoubtedly due to a chronic inflammation of the seminal vesicles and subsequent atony of these organs. Stripping of the vesicles, if done only with the finger, does not furnish results; it has to be executed by a massage instrument devised for this purpose. Occasionally vasostomy and subsequent injections of an antiseptic solution give results. The same is true of intravenous injection of small doses of neoarsphenamine. If all this fails, relief of the periodic swelling of the cord is brought about by resection of the tunica of the vas.

NERVOUS SYMPTOMS AFTER THYROIDECTOMY

To the Editor:—A woman, aged 39, was taken to the hospital with symptoms of toxic goiter. The rate of metabolism was + 85. On treatment with compound solution of iodine this went down to + 35, when thyroidectomy was performed. One fifth of the gland was left in. After the operation the patient felt fairly well. About eight days later she commenced to get attacks of nervousness and tremor, especially in the mornings. Again compound solution of iodine was given to her for a few days but without result. Therefore, this medicine was changed to parathyroid extract combined with calcium lactate, given orally. The patient apparently responded well to this medication, being able to get out of bed and walk around in the house, and the tremor seeming to ameliorate. A few days ago, that is, six weeks after the operation, however, the patient began to have severe attacks of sleeplessness, palpitation, tremor with tendency to jump out of bed, and pains in the heart region which made lying on the left side impossible. Now I started to give her calcium chloride intravenously with simultaneous oral administration of parathyroid extract, but it is too early yet to draw any conclusion regarding the result. I would appreciate any suggestion concerning treatment. Kindly omit my name.

M.D., New Jersey.

ANSWER.—The condition described may be due to a persistent hyperthyroidism because of the amount of thyroid tissue that was not removed at operation. It is therefore suggested that another basal metabolic rate be obtained. At any rate, it is advisable at this time not to give more compound solution of iodine. If the basal metabolic rate is still elevated, prolonged rest with sedatives and an attempt to remove any focus of infection should be instituted. If after a fair trial this is of no avail, it may be necessary to remove that portion of the thyroid gland still remaining. There is a possibility that the symptoms described may be due to removal of parathyroid tissue at operation. It is necessary to know whether the patient's myotatic irritability is increased, whether a Chvostek sign is present, and whether the threshold of the electrical excitability of the peripheral nerves is decreased. If these are positive, treatment should be continued.

Medical Education, Registration and Hospital Service

COMING EXAMINATIONS

ALABAMA: Montgomery, July 12-15. Chairman, Dr. S. W. Welch, Montgomery.

ARIZONA: Phoenix, July 5-6. Sec., Dr. W O. Sweek, 404 Heard Bldg., Phoenix.

CALIFORNIA: San Francisco, June 27-30. Sec., Dr. Charles B. Pinkham, 908 Forum Bldg., Sacramento.

COLORADO: Denver, July 5. Sec., Dr. David A. Strickler, 1011 Republic Bldg., Denver.

CONNECTICUT: Hartford, July 12-13. Sec. Dr. Robert L. Rowley, 79 Elm Street, Hartford.

DELAWARE: Wilmington, June 21-23. State Society and Homeopathic. Pres., Dr. H. W. Briggs, 1026 Jackson St., Wilmington.

DISTRICT OF COLUMBIA: July 12. Sec., Dr. Edgar P. Copeland, Suite 110, 1801 Eye Street, Washington.

HAWAII: Honolulu, July 11-14. Sec., Dr. James A. Morgan, Young Bldg., Honolulu.

ILLINOIS: Chicago, June 28-30. Supt. of Regis., Mr. V. C. Michels, Springfield.

INDIANA: Indianapolis, June 21-23. Sec., Dr. E. M. Shanklin, 421 State House, Indianapolis.

KANSAS: Topeka, June 21. Sec., Dr. A. S. Ross, Sabetha.

KENTUCKY: Louisville, June 21-23. Sec., Dr. A. T. McCormack, 532 W. Main Street, Louisville.

MAINE: Bangor, July 5-6. Sec., Dr. Adam P. Leighton, Jr., 192 State Street, Portland.

MARYLAND: Baltimore, June 21-24. Sec., Dr. Henry M. Fitzhugh, 1211 Cathedral St., Batlimore.

MASSACHUSETTS: Boston, July 12-14. Sec., Dr. Frank M. Vaughan, 144 State House, Boston.

MICHIGAN: Detroit, June 20-22. Sec., Dr. Guy L. Connor, 707 Stroh Building, Detroit.

MINNESOTA: Minneapolis, June 21-23. Sec., Dr. A. E. Comstock, 636 Lowry Building, St. Paul.

MISSISSIPPI: Jackson, June 21-22. Sec., Dr. Felix J. Underwood, Jackson.

MISSOURI: St. Louis, July 13-15. Sec., Dr. James Stewart, Jefferson City.

NEW YORK: Albany, Buffalo, New York and Syracuse, June 27-30. Chief, Professional Examinations, Mr. Herbert J. Hamilton, State Education Bldg., Albany.

NORTH CAROLINA: Raleigh, June 21. Sec., Dr. John W. MacConnell, Davidson.

NORTH DAKOTA: Grand Forks, July 5-8. Sec., Dr. G. M. Williamson, Grand Forks.

OREGON: Portland, July 5-7. Sec., Dr. M. K. Hall, 816 Pittock Block, Portland.

PENNSYLVANIA: Philadelphia and Pittsburgh, July 5-9. Dir. Professional Education Bureau, Mr. C. D. Koch, Harrisburg.

RHODE ISLAND: Providence, July 7. Sec., Dr. B. U. Richards, Providence.

SOUTH CAROLINA: Columbia, June 28. Sec., Dr. A. Earle Boozer, 505 Saluda Ave., Columbia.

SOUTH DAKOTA: Huron, July 19. Dir. Medical Licensure, Dr. H. R. Kenaston, Bonesteel.

TEXAS: Austin, June 21-23. Sec., Dr. T. J. Crowe, 918 Mercantile Bank Bldg., Dallas.

VERMONT: Burlington, June 22-24. Sec., Dr. W. Scott Nay, Underhill.

WASHINGTON: Seattle, July 11. Basic Science Examination, Seattle, July 7-8. Ass't. Director, Mr. George L. Berger, Olympia.

WEST VIRGINIA: Martinsburg, July 26. Commissioner, Dr. W. T. Hinshaw, Charleston.

WISCONSIN: Milwaukee, June 28-30. Sec., Dr. Robert E. Flynn, La Crosse. Basic Science Board: Milwaukee, June 27. Sec., Dr. M. F. Guyer, Madison.

Minnesota January Examination

Dr. A. E. Comstock, secretary of the Minnesota Board of Medical Examiners, reports the written, oral and practical examination held at Minneapolis, Jan. 4-6, 1927. The examination covered 15 subjects and included 80 questions. An average of 75 per cent was required to pass. Forty-five candidates were examined, all of whom passed. Twenty-two candidates were licensed by reciprocity. The following colleges were represented:

PASSED College	Year Grad.	Per Cent
Stanford University School of Medicine	(1925)	89.4
Northwestern University Medical School	(1926)	88.4, 89
Rush Medical College	(1923)	90.4
University of Minnesota Medical School	(1926)	90.5, 91.6,
(1926)* 85.6, 85.8, 86.7, 87.2, 87.2, 87.3, 87.5, 87.7, 88, 88, 88.8, 89, 89, 89.1, 89.1, 89.4, 89.4, 89.5, 89.5, 89.5, 89.5, 89.7, 89.8, 90.3, 90.3, 90.8, 91.2, 91.4, 91.7, (1927) 90.5, 91.6		
St. Louis University School of Medicine	(1926)	89.4
Washington University School of Medicine	(1925)	88.8, 89
Columbia University College of Phys. and Surgs.	(1926)	89.9
Cornell University Medical College	(1925)	84.4
University of Pennsylvania School of Medicine	(1924)	86.7
McGill University Faculty of Medicine	(1925)	90.8
Durham University, England	(1924)	90.4

LICENSED BY RECIPROCITY College	Year Grad.	Reciprocity with
College of Medical Evangelists	(1925)	California
Emory University School of Medicine	(1925)	Georgia
Loyola University School of Medicine	(1926)	Tennessee
Northwestern University Medical School	(1926)	Ohio
Rush Medical College	(1925)	Illinois
State University of Iowa College of Medicine	(1921)	Iowa
Johns Hopkins University School of Medicine	(1924)	Maryland
Harvard University	(1925)	Illinois
University of Michigan Medical School	(1924, 2)	Michigan, Maryland
Creighton University School of Medicine	(1908), (1926)	Nebraska
University of Nebraska Coll. of Med.	(1924), (1925), (1926)	Nebraska
Ohio State University College of Medicine	(1921) (1924)	Wisconsin Ohio
University of Cincinnati College of Medicine	(1924)	Ohio
Jefferson Medical College of Philadelphia	(1923)	Penna.
University of Pennsylvania School of Medicine	(1923)	Penna.
Marquette University School of Medicine	(1926)	Wisconsin

* These candidates have completed the medical course and received the M.B. degree and will receive the M.D. degree on completion of a year's internship in a hospital.

Medical Economics

OWNERSHIP OF ROENTGENOGRAMS AND HOSPITAL RECORDS

Careful search has failed to reveal any case in which a court has decided whether a person who is roentgenographed is, in the absence of an express agreement, entitled to the resulting roentgenogram. A somewhat similar question has been decided, however, with respect to the right of a person photographed to the photographic negatives incident to the process. Courts have held that the negative is the property of the photographer, subject to certain restrictions on its use.[1] But the parallel is not perfect; every one knows that a person who presents himself to a photographer to be photographed expects to receive a photograph and does not expect to receive any intermediate product of the process of manufacture, but it is not clear whether a person who presents himself to be roentgenographed expects to receive, and the roentgenologist expects to give, an opinion and advice, or a roentgenogram, or both. In the absence of an express agreement, a court that is called on to determine the question will try to find out what was in the minds of the parties to the transaction at the time it occurred. To that end it must look for proof of a reasonably definite and generally recognized understanding among roentgenologists and their patrons with respect to the matter.

Proof of any understanding whatever among the nonprofessional public would probably be difficult. Persons of this class are referred to roentgenologists, present themselves for examination, and await the reports of the results, which they receive through their physicians; they do not stop, before being roentgenographed, to ask whether or not they are going to receive roentgenograms. Among roentgenologists and physicians generally, however, a common understanding is more readily susceptible of proof. A formal statement of that understanding by a representative professional group is to be found in resolutions adopted in 1920 by the Radiological Society of North America. There it is expressed as the sense of the society that all roentgenograms, plates, films, negatives, photographs, tracings or other records of examination are the exclusive property of the roentgenologist who made them or of the laboratory where they were made. The roentgenologist is declared to be a professional man, whose opinion and advice are sought; he is not a mere technician, paid to make a certain kind of photograph called a roentgenogram. He is a consultant in all cases in which he is called on to examine patients; therefore he is not to make known to a patient or to a patient's relatives, friends or guardian any of his observations or conclusions. He is not to deliver to any of them any plate, negative, film or print unless requested so to do by the physician who referred the patient for examination or who is in charge of the case. Evidence showing a general acceptance by the profession of the principles laid down in these resolutions will go a long way, in the absence of an express agreement, toward settling the question of the ownership of the roentgenogram, if and when that question comes before the courts.

The fact that a roentgenogram was made by a hospital, through its roentgenologist, and not by a roentgenologist acting for himself, does not alter the situation just stated, except that it makes a stronger case for the retention of the roentgenogram

1. Corliss et al. v. Walker Co. et al., 64 Fed. 280. Pollard v. Photographic Company, 49 Ch. Div. 345.

by the hospital. A hospital may make such reasonable regulations as are necessary for its efficient management. If any such regulation is in fact brought to the attention of a patient or a physician using the hospital, or if he has actual knowledge of that regulation, before he enters on such use, he is bound by it. The fact that the regulation is posted in and about the hospital or even that it has been customarily followed for a long time would tend to prove such knowledge on the part of a physician or a patient and to bind him accordingly. If any such regulation requires that the records, including roentgenograms, remain in the hospital, it would presumably be sufficient to compel a physician or a patient to leave his case records there, including roentgenograms.

Whether a patient may as a matter of right inspect his hospital records, including any roentgenogram that may form a part of it, or may have that record inspected on his behalf, or may make a copy of it or have a copy made, and whether he may require the hospital to provide him with a copy of the record on tendering the cost of making it, are questions that the courts have apparently not been called on to decide. If such questions are fairly presented, a court may not unreasonably hold that a patient is entitled to make such an inspection or to have it made, under conditions that do not interfere with the orderly operation of the hospital. It seems not unlikely, too, that the court may hold that a patient is entitled to a copy of this hospital record so far as it is necessary to his welfare, at least on payment of the cost of preparing the copy. The fact that these various questions have never been carried to the courts of last resort and possibly to no other courts suggests very strongly that they are usually settled by the parties on the basis of equity and common sense—which, after all, is the very best way to settle them.

Book Notices

STUDIES IN INTRACRANIAL PHYSIOLOGY AND SURGERY. The Third Circulation. The Hypophysis. The Gliomas. By Harvey Cushing, M.D. The Cameron Prize Lectures delivered at the University of Edinburgh, October 19, 20, 22, 1925. Cloth. Price, $3.25. Pp. 146, with 16 illustrations. New York: Oxford University Press, 1926.

The three Cameron prize lectures given by Cushing at the University of Edinburgh have been published in book form. They represent the work of his pupils and himself on the cerebrospinal fluid, the hypophysis and intracranial tumors. One marvels at the amount and diversity of the investigations which he has pursued, but his greatest contribution is perhaps the enthusiasm and spirit for research which he has stimulated in others. Herein he is kin to the great teacher whose life he has told so vividly. The lectures not only tell the story to date but are full of unsolved queries which will probably direct the lines of future work on these subjects.

HANDBUCH DER INNEREN SEKRETION. Eine umfassende Darstellung der Anatomie, Physiologie und Pathologie der endokrinen Drüsen. Herausgegeben von Dr. Max Hirsch. Band I. Lieferung 2. Band II. Lieferung 2. Paper. Price, 13.50 and 12 marks. Pp. 197-336, and 277-422, with illustrations. Leipsic: Curt Kabitzsch, 1927.

These two divisions of this ambitious system contain chapters on the hypophysis and epiphysis by Aschner, chapters on the mammary glands, uterus, vagina and placenta by Lahm, a chapter on the testis by Jaffe and Berberich, and a chapter on the epididymis and the prostate by Fischer. Both numbers are well illustrated with anatomic preparations and photographs. Dr. Aschner is one of the earlier workers in the field of hypophysial physiology by the method of extirpation. The informed reader finishes Dr. Aschner's chapter on the hypophysis with the feeling that the Viennese investigator is not down to date. For example, in such an ambitious undertaking published in 1927 one certainly would expect reference to the important work of Smith, Evans, Borquin and others in this country on the various phases of hypophysial physiology, as well as reference to the experiments of Dandy and of Horrax on the pineal body. One looks in vain for either. The clitoris is listed as an organ of internal secretion, but fortunately Dr. Lahm sums up the discussion on this subject with the statement that "nothing is known concerning the internal secretion of the clitoris." The same author concludes in the chapter on the placenta that "it is yet an open question whether the lipoids of the placenta are specific" and that "nothing definite has been proven regarding the hormone character of the placenta lipoids." The final statement on the placenta as an endocrine organ reads, "According to the best information to date the placenta is not an independent organ of internal secretion."

TUBERCULOSIS: Bacteriology, Pathology and Laboratory Diagnosis with Sections on Immunology, Epidemiology, Prophylaxis and Experimental Therapy. By Edward R. Baldwin, M.D., Director of the Trudeau Foundation, S. A. Petroff, Ph.D., Bacteriologist and Director of Trudeau Sanatorium Research and Clinical Laboratory, and Leroy U. Gardner, M.D., Pathologist and Director of Saranac Laboratory for the Study of Tuberculosis. The Trudeau Foundation Studies. Cloth. Price, $4.50. Pp. 342, with 86 illustrations. Philadelphia: Lea & Febiger, 1927.

In this book the fields indicated within the broad scope of the title are covered with extraordinary conciseness without sacrifice of important, informing detail. The work represents an excellent selection of the significant. After a brief historical introduction, the subject matter is opened with chapters on the tubercle bacillus, which are properly conventional but at the same time cover recently established contributions to the subject. Chapters on experimental tuberculous infection, reinfection and immunity bring together in a well written section material heretofore widely scattered in the literature of tuberculosis, much of it coming originally from or directly inspired by the laboratories from which this book emanates. Two chapters on the pathologic anatomy of human tuberculosis would be a credit to any textbook of general and special pathology, and have the special merit of making available for general reading some of the authors' own studies, such as the anatomic healing of intestinal tuberculosis. There is a clear and also optimistic chapter on epidemiology, in which the factors responsible for the recent rapid decline in tuberculosis mortality are outlined and analyzed. The section on laboratory methods in diagnosis fills a long felt want in public health, research and hospital laboratories. Careful captioning and subheading of the subject matter make of the work an extensive outline as well as an adequate treatise. Investigators in any of the fields touched will find the bibliography cited well selected. In spite of the extent of scientific material covered by the book, the authors have found space in its 300 pages to furnish brief, practical instructions on the minor but neglected matter of the care of animals. The press work is excellent and the illustrations are clear.

EXOPHTHALMIC GOITRE. By John Eason, M.D., F.R.C.P.E., Physician, Royal Infirmary, Edinburgh. Cloth. Price, 12/6 net. Pp. 215, with illustrations. Edinburgh: Oliver & Boyd, 1927.

The author should be congratulated on bringing before the profession in concise form the essentials of the subject. The book is not intended to be an encyclopedia but a monograph correlating the latest views and presenting in a condensed manner the author's conclusions and how and why they were formed. The exposition is rapid and clear, with many graphic references to recent literature. Its excellence of literary style, its systematic organization and its presentation of precise practical deductions call for special appreciation. The subject is treated in a critical rather than a dogmatic manner. Although brief the text is full, and clearness has not been sacrificed for brevity. The author has been successful in his endeavor to appraise "the relative importance of the sympathetic and parasympathetic divisions in regard to symptomatology and pathogenesis and to show the relationship of autonomic tone to general nervous excitability, general cell hyperactivity and thyroid hyperfunction." The first chapter deals with the difficult subject of the general anatomic and physiologic considerations of the thyroid vesicle as the unit of secretion. In succeeding chapters, the etiology, symptomatology, pathologic changes, prognosis and treatment are clearly dealt with. The indications and contraindications for the different forms of treatment, medical, roentgen-ray and surgical, are definitely and clearly set forth. The author does not deal with the technic of operation or with psycho-

therapy, but other forms of treatment are discussed in a thorough manner. The author is skeptical with regard to the reliability of conclusions founded only on animal experimentation. The book is in every sense of the word practical, replete with suggestions, and valuable not only to the specialist but also to the general practitioner who desires a clear, full sketch of the present knowledge of exophthalmic goiter without having to read all the voluminous and often conflicting literature on the subject.

THE NATURAL HISTORY OF OUR CONDUCT. By William E. Ritter, President of Science Service. With the Collaboration of Edna Watson Bailey, Lecturer in Education & Association Director of Practice Teaching, University of California. Cloth. Price, $3.50. Pp. 339. New York: Harcourt, Brace & Company, 1927.

The evolutionists are, of course, convinced that not only the body of man but also his behavior is a direct development from lower forms. The purpose of Dr. Ritter's volume is to establish not only the former fact but also the latter. He indicates that the only successful animal activities are those which are purposeful, but there are also maladaptive activities which work for the destruction of the animal. Human beings also act occasionally for their own destruction. One of the remarkable facts is the lack of regret, sorrow, remorse or sympathy in animal forms in active destruction to their own kind. However, Dr. Ritter expresses the belief that many mammals and birds do possess the germs of moral consciousness. He traces adaptive activities of self-injury through the birds, the mammals and the anthropoid apes to a similar process among human beings of low culture and of high culture. Unfortunately, some of the problems concerned have been so little studied that conclusions are difficult. Man is the most adaptive of all living beings; that adaptation has come about through his gradual development over a vast period of time.

KURZES LEHRBUCH DER CHEMISCHEN PHYSIOLOGIE. Von Dr. Ernst Schmitz, o. ö. Professor an der Universität Breslau. Second edition. Cloth. Price, 16.80 marks. Pp. 384. Berlin: S. Karger, 1927.

This short textbook covers the ground usually included in the older works on physiologic chemistry. It is a good introductory volume. The first two chapters are devoted to general remarks together with brief but hardly worth-while discussions on solutions, osmotic pressure, electrolytic dissociation, colloids, surface tension, and mineral composition of organisms. Then follow brief but good descriptive chapters on lipins, carbohydrates, proteins and nucleoproteins. Many new observations are cited, but little attempt is made to try to organize the material for the student on a general fundamental organic chemistry basis. The enzymes are treated briefly under digestion. Absorption is well treated from the standpoint of specificity, but there is no theoretical discussion on the possible mechanisms involved. Blood and lymph are discussed at some length, but the student is not aided in finding his way through the maze of terminology which has crept into the literature on the subject of blood coagulation. Then follow chapters on the liver, muscle, nerve, connective tissue, milk, urine, skin, internal secretions, respiration and general metabolism. Muscle metabolism and the chemistry involved in muscle activity are well treated. The book is well bound and excellently printed.

EXAMINATION OF CHILDREN BY CLINICAL AND LABORATORY METHODS. By Abraham Levinson, B.S., M.D., Associate in Pediatrics, Northwestern University Medical School. Second edition. Cloth. Price, $3.50. Pp. 192, with 85 illustrations. St. Louis: C. V. Mosby Company, 1927.

Those physicians who argue that the child is merely a small replica of the adult, and that it is only necessary to consider his physical disturbances in that light, will find much cause for revising their opinion in this practical guidebook to methods of physical examination as applied to the child. All the subjective symptoms and the history to which one gives such care in examining the adult are here had at second hand from the mother or some other relative. The technical procedures in which the adult frequently cooperates are carried out on the child sometimes under conditions of great resistance. The conditions of the blood both as to morphology and as to chemistry vary greatly. All apparatus applied directly to the infant is obviously in miniature. These are the considerations underlying Dr. Levinson's contribution. The advice given is direct. All the chapters are fully illustrated, and the methods are based on extensive experience both in the hospital and in the home. Of greatest importance are the indications under which certain diagnostic procedures are warranted. These the author selects with a practical conservatism.

KLINISCHE SYMPTOMATOLOGIE UND DIFFERENTIAL-DIAGNOSE INNERER KRANKHEITEN. Band III: Weitere klinische Symptome und Differential-Diagnose. Von Prof. Dr. Norbert Ortner, Vorstand der II. med. Klinik der Universität Wien, Hofrat. Second edition. Paper. Price, 21 marks. Pp. 457. Berlin: Urban & Schwarzenberg, 1927.

It is difficult to review this work because of its encyclopedic character. The contents are so extensive that the best that can be expected is a short description of any one subject. The author has succeeded, nevertheless, in giving in presentable form a differential diagnosis of all the tumors of the abdomen and all the conditions associated with fever, pulmonary and cardiac diseases, liver enlargements and the psychasthenic states. The value is enhanced by a marginal index whereby the subject matter sought for can be easily located. A differential diagnosis of conditions associated with fever is so vast that one can hardly expect much in twenty-eight or thirty pages. It would seem, therefore, that this discussion were better eliminated and more space devoted to other conditions. There are too many repetitions in the section devoted to abdominal tumors. This is due to the overlapping of tumors from one part to another of the sections in which the abdomen is divided for discussion. On the whole, the book is satisfactory for physicians who want a rapid aid in diagnosis.

Books Received

Books received are acknowledged in this column, and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for more extensive review in the interests of our readers and as space permits. Books listed in this department are not available for lending. Any information concerning them will be supplied on request.

CHIRURGISCHE RÖNTGENOLOGIE: Ein Grundriss der Anwendung der Röntgenstrahlen in der Chirurgie mit einem Anhang-Radiumtherapie. Von Dr. Hans Kurtzahn, Privatdozent für Chirurgie (chirurgische Universitäts-Klinik, Königsberg). Mit einem Geleitwort von Prof. Dr. M. Kirschner, Direktor der chirurgischen Universitäts-Klinik, Königsberg. Paper. Price, 10.20 marks. Pp. 216, with 110 illustrations. Berlin: Urban & Schwarzenberg, 1927.

Brief text with outline of technic and indications.

EXPERIMENTELLE UND KLINISCHE BETRACHTUNGEN ÜBER DIE GLEICHFÖRMIGKEIT VON NERVEN-, HORMON- GIFT- UND IONENWIRKUNG AUF DIE WASSERBEWEGUNG IM ORGANISMUS. Von Fr. Kraus. Heft 2. Sammlung der von Nothnagel-Stiftung veranstalteten Vorträge. Paper. Price, 1.80 marks. Pp. 23, with 4 illustrations. Berlin: Urban & Schwarzenberg, 1927.

Showing that the water metabolism of the body is a complicated process.

HISTORY OF CARDIOLOGY. By Louis Faugères Bishop, M.A., M.D., Sc.D., President, Medical Association of Greater City of New York, and John Neilson, Jr., B.S., M.D., Assistant in the Cardiac Clinic, St. Luke's Hospital, New York. With an Introduction by Victor Robinson, Ph.C., M.D. Cloth. Price, $5. Pp. 71. New York: Medical Life Press, 1927.

A tracing of scientific attempts to solve the problems of heart disease, but with a large price for such a small book.

THE HARVEY LECTURES. Delivered Under the Auspices of the Harvey Society of New York, 1925-1926. Under the Patronage of the New York Academy of Medicine. Series XXI. By Dr. F. R. Nager, Dr. John H. Northrop, Dr. Warren H. Lewis, Dr. Edwin B. Wilson, Dr. Knud Faber, Dr. B. Brouwer and Dr. J. B. Collip. Cloth. Price, $4. Pp. 229, with illustrations. Baltimore: Williams & Wilkins Company, 1927.

Classic lectures on a variety of medical topics.

ANTIGÉNOTHÉRAPIE DE LA TUBERCULOSE PAR LES EXTRAITS MÉTHYLIQUES DE BACILLES DE KOCH. Par L. Nègre, et A. Boquet, Chefs de laboratoire à l'Institut Pasteur. Préface du Professeur A. Calmette, membre de l'Académie de médecine; sous-directeur de l'Institut Pasteur. Paper. Price, 16 francs. Pp. 158, with illustrations. Paris: Masson & Cie, 1927.

Clinical report on use of tuberculins.

APPLIED MUNICIPAL SANITATION. By V. M. Ehlers, Chief Sanitary Engineer, E. G. Eggert, Sanitary Engineer, and Ella G. White, Secretary, Division of Sanitary Engineering, State Health Department. Cloth. Pp. 167, with illustrations. Austin: Texas Association of Sanitarians, 1925.

Municipal practice in control of water, sewerage, milk and mosquitoes.

CLINICAL APPLICATION OF SUNLIGHT AND ARTIFICIAL RADIATION, INCLUDING THEIR PHYSIOLOGICAL AND EXPERIMENTAL ASPECTS WITH SPECIAL REFERENCE TO TUBERCULOSIS. By Edgar Mayer, M.D. Cloth. Price, $5. Pp. 468, with illustrations. Baltimore: Williams & Wilkins Company, 1926.

A survey of light therapy with special reference to tuberculosis.

THE PRINCIPLES OF PATHOLOGY. By Charles Powell White, M.D., F.R.C.S., Honorary Lecturer in Pathology and Director of the Helen Swindells Laboratory in the University of Manchester. Cloth. Price, $6. Pp. 279. New York: Longmans, Green & Company, 1927.

Evidence and personal opinions of the processes causing disease and the changes they bring about.

OBSTETRICS FOR NURSES. By Joseph B. DeLee, A.M., M.D., Professor of Obstetrics at the Northwestern University Medical School. Eighth edition. Price, $3 net. Pp. 635, with 267 illustrations. Philadelphia: W. B. Saunders Company, 1927.

New edition with special changes on prevention of infection, analgesia, and other obstetric procedures.

MÉTABOLISME DE L'EAU. Oedèmes. Diurèse. Les thérapeutiques hydriques. Par Marcel Labbé, professeur à la Faculté de médecine, et P.-L. Violle, chef de laboratoire à l'Institut d'hydrologie. Paper. Pp. 256. Paris: Masson & Cie, 1927.

Monograph on edema, diuresis and hydrotherapy.

THE SORCERER'S APPRENTICE. By Hans Heinz Ewers. Translated from the German by Ludwig Lewisohn. Cloth. Price, $5. Pp. 337, with illustrations. New York: John Day Company, 1927.

Novel dealing with evangelism, flagellation and other aberrations associated with religious ecstacy.

THE GOLDEN COMPLEX. A Defence of Inferiority. By Lee Wilson Dodd. Cloth. Price, $1.75. Pp. 171. New York: John Day Company, 1927.

A lightly humorous consideration of the newer psychology and the inferiority complex.

MENTAL TESTS IN CLINICAL PRACTICE. By F. L. Wells, Ph.D., Chief of Psychological Laboratory, Boston Psychopathic Hospital. Cloth. Price, $2.16. Pp. 315. New York: World Book Company, 1927.

Technic and interpretation of intelligence tests and personality studies.

METHODS AND PROBLEMS OF MEDICAL EDUCATION. (Sixth Series). Paper. Pp. 275, with illustrations. New York: Rockefeller Foundation, 1927.

Descriptions of equipment and buildings in many medical schools.

UEBER RHEUMATISMUS UND CHRONISCHE GELENKERKRANKUNGEN. Von Dr. Wilhelm Schulhof. Paper. Pp. 114. Budapest: Petofi, 1926.

Brief monograph without a new idea in it.

ROUTINE PROCEDURES — THE LANKENAU HOSPITAL, PHILADELPHIA, PENNSYLVANIA. Edited by Edward L. Bortz, M.D., Associate in Medicine. Leather. Price, $1. Pp. 95. Philadelphia: Lankenau Hospital, 1926.

ONDERZOEKINGEN GEDAAN IN HET PHYSIOLOGISCH LABORATORIUM DER RIJKSUNIVERSITEIT TE UTRECHT. Door H. Zwaardemaker. Paper. Pp. 193, with illustrations. Utrecht: A. Oosthoek, 1927.

CREMATION AND THE PUBLIC HEALTH. By W. Allen Daley, M.D., M.B., B.Sc., Medical Officer of Health for the City of Hull. Pp. 16. London: Cremation Society of England, 1927.

TWENTY-NINTH BIENNIAL REPORT OF THE STATE BOARD OF HEALTH OF CALIFORNIA FOR THE FISCAL YEARS FROM JULY 1, 1924, TO JUNE 30, 1926. Paper. Pp. 197. Sacramento, 1926.

ANNUAL REPORT OF THE PRESIDENT OF THE BOARD OF HEALTH OF THE TERRITORY OF HAWAII FOR THE FISCAL YEAR ENDING JUNE 30, 1926. Paper. Pp. 205. Honolulu, 1927.

TRANSACTIONS OF THE SEVENTY-THIRD ANNUAL SESSION OF THE MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA. Cloth. Pp. 62, with illustrations. Southern Pines, 1927.

PROCEEDINGS OF EIGHTH TEXAS WATER WORKS SHORT SCHOOL, Texas Section S. W. Water Works Association. Bulletin No. 1. Cloth. Price, $2.50. Pp. 186. Austin, 1926.

Medicolegal

Typhoid Not Accidental Compensable Injury

(Buchanan et al. v. Maryland Casualty Co. (Texas), 288 S. W. R. 116)

The Commission of Appeals of Texas, section B, says that this cause was before the supreme court on a certificate from the court of civil appeals presenting for determination three questions: Under the workmen's compensation act (of Texas), is typhoid, contracted by an employee as a result of impure water or food furnished by an employer, an accidental injury under the terms of the act? Under the workmen's compensation act, is typhoid, contracted by an employee as a result of the impure water or food furnished by an employer, a compensable injury? Was the trial court correct in sustaining a general demurrer to the claimants' petition, or was it error for the court of civil appeals to affirm the holding of the trial court in that respect? In this case an employee of a development company while working in its oil fields was stricken with typhoid, from which he died. The claimants of compensation for his death averred that he contracted the fever by reason of the food or drinking water furnished him by the company. But the commission of appeals was not able to find any decision allowing recovery in this kind of a case under a statute similar to that of Texas. Under statutes similar to that of Texas it is the uniform holding of the courts that before any disease is compensable it must be the direct result of an injury. Not only so, but that injury must be to the physical structure of the body. This language has been construed to mean that the disease must result from violence on the external portion of the body. The decision of the court of civil appeals in this case is in line with the authorities in other states which have statutes most similar to that of Texas; and it is recommended that the first question certified be answered in the negative; that the second question be answered in the negative; and that the third question be answered to the effect that the trial court correctly sustained the general demurrer and that the court of civil appeals reached the right conclusion in affirming such action by the trial court. The opinion of the commission of appeals answering certified questions adopted, and ordered certified to the court of civil appeals.

"Good Health," "Illness," "Disease," "Sickness"

(Northwestern Mut. Life Ins. Co. v. Wiggins (U. S.), 15 Fed. R. (2d) 646)

The United States Circuit Court of Appeals, ninth circuit, in affirming a judgment of dismissal, says that the plaintiff insurance company by suit in equity sought to cancel a policy issued by it, March 19, 1924, on the life of one Wiggins, on the ground that material false statements were knowingly made by him as to the condition of his health. The plaintiff asserted that the insured had for several years had myelogenous leukemia, which caused his death, Sept. 4, 1924. The trial court found that about four years prior to his application for the insurance he had some teeth extracted and bled profusely, that his family physician found that he had the disease referred to, treated him for some time, and in July, 1922, advised him to take treatments from a roentgenologist, who gave him treatments into February, 1924, during which time he reported to his physician as often as once every two weeks to have an examination of his blood. Neither physician ever disclosed to him the nature or character of his trouble, but made every effort to keep such knowledge from him. They frequently, however, discussed with him his blood count, and his family physician once told him that he had anemia, and probably used the word "chronic." In his application for insurance he stated that he last consulted a physician "two weeks ago, for general examination," and answered "Yes" to the question, "Have you fully recovered and are you now in good health?" He also answered "No" to questions asking him whether he had had any illness, disease or accident during the past ten years not mentioned, and whether he had had since childhood any chronic or constitutional disease or severe injury not fully set forth.

Did the insured have knowledge of serious impairment of health? He knew he had "chronic" anemia; that is, it had

continued for some time. "Good health," "illness" and "disease" must be considered, in an application for insurance, not in the light of scientific technical definitions but in the light of the insured's understanding in connection with which the terms are employed in the examination. The most specific information that he had was that he had an impoverishment of the blood, or "thinness of the blood." This condition, the record disclosed, may be occasioned by hemorrhage. In the insured's case the inception of the condition to his mind was the extraction of teeth, which was no accident, and the physicians studiously kept from him his true condition. His condition did not interfere with his usual avocation. No indisposition of health had interrupted his daily attention to business except a day or two for a cold. He did not complain to his family or to any one with whom he came in contact. His family believed that he was in good health. "Sickness" is a condition interfering with the usual avocations. He took on new responsibilities by increasing his interest in business many thousand dollars. He was active and energetic. He was a layman, and, while he may have been conscious of a weakened condition of the body, perhaps from the loss of blood from the cavities of the extracted teeth, the proof did not establish such fact or that he knew he had a disease which tended to weaken or to undermine his constitution. He looked well; the examining physician believed that he was a good risk. His ignorance of affliction by disease or impairment of health was emphasized by the fact that he did not make his will until a month before his death. His answers were not warranties, and were presumed to be true. Fraud is never presumed, and to cancel the policy the burden was on the complainant to show that the answers were false by clear, cogent, convincing and certain proof. This court believes with the trial court that the plaintiff did not sustain the burden imposed by law.

Liability for Suicide of Patient in Sanatorium

(Smith v. Simpson et al. (Mo.), 288 S. W. R. 69)

The Kansas City (Mo.) Court of Appeals, in affirming a judgment for $3,000 for the plaintiff, for the death of his wife alleged to have been caused by the negligence of the defendants and their servants, says that the defendants were physicians who, as copartners, owned and conducted a private sanatorium in which Mrs. Smith was a patient and committed suicide by hanging herself from an elbow of a steam pipe, by the use of sheets. There was testimony in the plaintiff's behalf which tended to show that his wife was afflicted with nervous and mental disease with suicidal mania, and manifested a disposition to destroy herself, and that the defendants were fully informed of her condition when they accepted her as a patient after examination. As the court read the petition, the crux of the negligence charge was that the defendants failed to use ordinary care to watch Mrs. Smith, and thereby prevent her self-destruction, by reason of her alleged nervous and mental derangement. There was substantial evidence that the defendants knew of her suicidal tendency. There can be no question that it is the law that the defendants were required, not only to use ordinary care in treating the patient for her illness, but also to safeguard her from injuring herself by reason of her suicidal tendency.

It seemed to be the defendants' contention that, before the plaintiff could recover damages, he was required to prove that his wife was insane, but the court thinks that this contention was without merit in view of the fact that the allegations of the petition did not include insanity. It was not disputed that all the authorities hold that private hospitals owe to their patients such ordinary care and attention as the mental and physical condition of such patients reasonably requires. The law demands reasonable care, such care as a reasonable man would take under the circumstances existing; but no man is required to take measures against a danger which the circumstances as known to him do not suggest as likely to happen. These circumstances include the patient's mental condition and aberrations, and what he is likely to do by reason thereof, and the dangers afforded by his surroundings.

The plaintiff having produced substantial evidence in support of the allegations of his petition, this court must hold that there was no error in the action of the trial court in overruling the defendants' demurrer at the close of the evidence of the plaintiff. At best, there was raised an issue of fact for the jury's consideration. To the contention that an instruction to the jury was erroneous because it allowed recovery unless the defendants had nurses stationed to watch Mrs. Smith day and night, which was contrary to the care and duty imposed on them, the court answers that, as already stated, the degree of care and diligence required of the defendants was to be measured by the mental and nervous condition of the patient and the indicated dangers surrounding her.

There can be no question about the liability of a privately owned hospital or sanatorium, conducted for individual gain and not for charitable purposes, for damage to its patients resulting from negligence attributable to the owners or agents of such hospitals. Moreover, in the face of the record, the court is unwilling to accept as conclusive the defendants' argument that, if the plaintiff established the fact that his wife was insane and that she was suffering from suicidal mania, then he also established, under the proof offered, that she would never get well, and therefore that he had not been damaged. It must be held that the husband was entitled to compensation for the loss of the society and comfort of his wife as against any one negligently depriving him thereof. The question as to the amount of his damage was for the jury to determine, under all the facts and circumstances in evidence.

Examination and Testimony with Regard to Sanity

(Blocker v. State (Fla.), 110 So. R. 547)

The Supreme Court of Florida, in affirming a conviction of defendant Blocker of murder in the second degree, says that he relied on the defense of insanity. When a physician, who qualified as an expert and testified that he had examined the defendant in 1923 and again on the day before he gave testimony, was asked as to what condition he found the defendant in regarding mentality, objection was made that that was irrelevant; also that when the defendant was examined in 1923 his counsel was not present, because not invited to be present, and that in the absence of his counsel there was a deprivation of the defendant's constitutional rights. But evidence tending to show the insanity of the defendant in a criminal case makes material and relevant evidence tending to establish his sanity, when offered by the state in rebuttal. Furthermore, it is not necessary to the admission of evidence about the examination of a defendant in a criminal case, for the purpose of ascertaining his sanity or insanity, to show the presence of his counsel or notice to him. Such an examination ought not to be surreptitious or clandestine, but must be fairly and impartially made. However, there is no rule of law requiring the presence of, or an invitation to, the defendant's attorney to be present on such an occasion. An examination of a defendant to ascertain his mental condition is not a deprivation of his constitutional rights, nor does such an examination require him to give evidence against himself. It was apparent that the defendant in this case had full opportunity to cross-examine the alienists, and he did so. There was nothing to indicate anything but a painstaking examination of the defendant by the alienists, and, from this examination, under the law, it was the privilege of the parties to have such experts express their opinions as to the sanity of the defendant, and this without first detailing the circumstances or the course of such examination. The opinion of an expert witness as to the sanity of a person may, under the law, be given, subject to such cross-examination as is proper. An expert on insanity may give an opinion based on his own examination of a person, on his observation of that person, or on any state of facts, supported by some evidence in the case, which he assumes as true; but the judge should be informed whether he bases his opinion on his own knowledge, or on a hypothetic state of facts, and should know what portion of the evidence he has assumed to be true in forming his opinion. It is not required that a court caution a jury as to the value of expert testimony, or of the opinion of an expert on insanity given in answer to a hypothetic question. But the jury is entitled to all the facts on which the expert bases his opinion. If he answers a hypothetic question, the facts therein set forth must have been proved on the trial. If he rests his answer on facts and knowledge he has acquired himself, he must impart them to the jury, if asked to do so.

Society Proceedings

COMING MEETINGS

American Ophthalmological Society, Quebec, Canada, June 27-29. Dr. Emory Hill, Professional Building, Richmond, Va., Secretary.
Minnesota State Medical Association, Duluth, June 30-July 2. Dr. E. A. Meyerding, 11 West Summit Avenue, St. Paul, Secretary.
Montana, Medical Association of, Missoula, July 13-14. Dr. E. G. Balsam, 222 Hart-Albin Building, Billings, Secretary.
New Hampshire Medical Society, Portsmouth, June 22-23. Dr. D. E. Sullivan, 7 North State Street, Concord, Secretary.
West Virginia State Medical Association, White Sulphur Springs, June 21-23. Mr. Joe W. Savage, 303 Professional Building, Charleston, Executive Secretary.
Wyoming State Medical Society, Cheyenne, June 27-29. Dr. Earl Whedon, Sheridan, Secretary.

ASSOCIATION OF AMERICAN PHYSICIANS

Forty-Second Annual Meeting, held at Atlantic City, N. J., May 3 and 4, 1927

The Vice President, DR. A. S. WARTHIN, Ann Arbor, Mich., in the Chair

Officers for 1927-1928

The officers of the association are: president, A. S. Warthin, Ann Arbor, Mich.; vice president, C. P. Howard, Montreal; secretary, J. H. Means, Boston; recorder, Thomas R. Boggs, Baltimore; treasurer, George Blumer, New Haven, Conn.; councilor, Joseph A. Capps, Chicago.

Hypertrophy and Dilatation of the Heart

DR. J. A. E. EYSTER, Madison, Wis.: The theory of increased activity of the muscle is universally accepted, the alteration in dynamics being the basis for this idea. Alteration in the nutrition of the muscle may also play a rôle, but the idea of stretching of the muscle has not had experimental support. In our work we have made experiments on dilatation preceding hypertrophy. In studying experimental aortic stenosis and aortic regurgitation, puncture of the ventricular septum has been followed by an increase in size, which reaches its maximum in seven days and disappears by the tenth day, when the heart is even smaller than normal; secondarily there occurs a later phase of enlargement, which reaches its maximum in 100 days. The heart is then longer and wider. In experiments on occlusion of the aorta and running salt solution into the heart under high pressure the results were similar. There seem to be two stages to these phenomena, the first due to stretching of the muscle and the second stage a hypertrophy of the muscle. In the lesions experimentally produced, the apex is the weakest part of the structure. The same factor seems to hold true clinically. The histologic picture shows increase in the size of the cells. Venous pressure is not increased at first. We divided the two stages of the lesion—the period of stretching, and the period of hypertrophy—and made the test of removing the band round the aorta on the third day. It was found that the lesion progressed in the same manner. Our studies were checked up by roentgen-ray examination and by clinical methods in man. We found a distinction between hypertrophied and normal hearts. There was no evidence of hypertrophy unless there was organic disease. Clinical hypertension can exist many years without developing hypertrophy. Our conclusions are, therefore, that injury to the muscle is one of the factors necessary to produce hypertrophy. Whether increased work is the cause must be tested by further experiment.

Changes in Human Electrocardiogram Following Iodine Medication and Thyroidectomy

DR. W. W. HAMBURGER, Chicago: Studies have been made on early hyperthyroidism with the previously undamaged heart, and also studies on the result of the use of iodine in these cases. In one patient, a girl of 16, who reacted unfavorably to compound solution of iodine, the T-wave went up and there was some evidence of decompensation. Under digitalis treatment there was a drop in the T-wave, although the reaction was unfavorable to iodine. In seeking the reason for these changes in the T-wave following thyroidectomy, we may consider, first, probable changes with the slowing of the pulse rate, and, secondly, changes in the structure of the heart muscle which occur with changes in the T-wave in connection with changes of electric potential. Also there are changes in the nervous regulatory control of the heart. We need further studies to show which change is most constantly present. In studies on normal people with the administration of iodine the results were conflicting. Some had change in the T-wave and some did not. The basal metabolism was not changed. Iodine caused diminution of the T-wave in 50 per cent of cases. Thyroidectomy caused the greatest diminution of the T-wave. There was frequently inversion of the T-wave following thyroidectomy.

Association of Severe Anemia and Angina Pectoris

DR. JAMES B. HERRICK, Chicago: I have encountered three cases of severe anemia with typical anginal attacks. One was a case of pernicious anemia; one, a case of myocardial disease and a severe anemia like pernicious anemia, and the third, a case of severe anemia in which the hemoglobin was only 16 per cent, because of hematuria of a year's duration. This man had very distinct anginal attacks increasing in severity. There were marked cardiovascular changes and high blood pressure. The man lived several months, and autopsy showed carcinoma of the right kidney. The coronary artery was sclerosed and there was fatty infiltration of the heart. The lesson to be drawn from this series is that some patients with angina might need treatment directed to the improvement of the blood condition. An improvement in general hygiene, including change of climate and a diet rich in carbohydrates and vitamins, would be indicated.

DISCUSSION

DR. F. T. LORD, Boston: I have had 140 cases of angina, and only one case with significant anemia attributable to chronic nephritis.

DR. GEORGE KOBER, Washington, D. C.: My personal experience with angina pectoris convinces me that toxins are capable of developing these lesions, and when the source of the toxins is removed the *vis medicatrix naturae* is capable of removing the damage inflicted. My teeth apparently were the offenders in my case.

DR. H. Z. GIFFIN, Rochester, Minn.: In our experience, the attacks have been much milder than anginal attacks of other types. There was only one instance of severe angina in pernicious anemia. The cases formed 3 per cent of the total number of pernicious anemia cases. The electrocardiographic findings were not remarkable, but autopsy showed stenosis of the coronaries.

DR. LEWIS A. CONNER, New York: This paper supplies evidence in favor of a coronary origin in cases of this type. I have seen two such instances. A distinguished surgeon in New York had attacks of angina which grew progressively worse until they were intolerable. Then he developed pernicious anemia. The attacks coming on frequently made his nights terrible on account of their severity. When his attacks became so bad, he was given a large transfusion. As a result of a transfusion of 1,000 cc., the attacks stopped suddenly. He never had another attack until his blood became so low as to require a second transfusion. After three or four weeks, the pain was relieved. He had about forty or fifty transfusions at intervals of three or four weeks. When the blood reaches a certain level the anginal attacks return and are an indication for another transfusion.

DR. HENRY A. CHRISTIAN, Boston: There are two anatomic factors in relation to this subject: First, the heart muscle is increased in bulk in severe anemia; patients with pernicious anemia have hypertrophic hearts and there is more muscle demanding blood supply. Second, this heart muscle shows a very characteristic degeneration.

DR. L. G. ROWNTREE, Rochester, Minn.: Was there any lowering of the blood pressure in these cases? I have seen a similar condition occurring in Addison's disease in which the blood is normal, but the circulation is very poor. The anginal symptoms are mild, however.

DR. S. A. LEVINE, Boston: I had a similar experience to that of Dr. Conner. My patient had typical angina pectoris,

in bed, without effort. The blood count was very low. I did a transfusion. The patient had no more attacks of angina after one transfusion. I think that the combination of coronary arteries and angina pectoris is not common. I do not think it likely that the anemia itself is the cause of the angina. The anemia would not initiate the attack without some background of coronary disease.

DR. JAMES R. HERRICK, Chicago: I think that some of these cases are purely accidental. Perhaps the best answer is that as the blood improved the anginal attacks improved. Anemia is not the primary cause. There must be cardiovascular factors underlying the condition. I did not take blood pressure readings in these cases, so I cannot say whether it was high or not.

Pathogenesis of Syphilitic Aortic Insufficiency

DR. R. W. SCOTT, Cleveland: Syphilitic lesions are an important cause of heart failure when they involve the root of the aorta. Aortic insufficiency is related to infiltration of the aortic ring or to lesions distal to the cusps. Usually, the aortic leaflets are invaded near the commissure, which is the spot most frequently involved in syphilitic hearts. The earliest lesions show obliterative changes in the arterioles in the region of the commissure, and also proliferation of new blood vessels. Therefore, syphilis spreads through the commissure to the aortic leaflets, through widening of the commissure. A late result seen at necropsy is due to fusion of the aortic intima with the aortic leaflets.

Relation of Syphilis to Angina Pectoris

DR. HARLOW BROOKS, New York: Osler is quoted as saying that angina pectoris under the age of 40 years is strongly indicative of syphilis. I take issue with this generalization. I have found it in youth to occur with acute infections causative of myocardial disease, such as scarlet fever, tonsillitis, rheumatism and influenza generally. It may, and does, occur with syphilis, however, and syphilitic angina is more common than we suppose, and escapes us because it is recognized only in the immediately premortem stage, and is not frequently enough confirmed post mortem, especially in private practice. I classify true angina pectoris as comprising those cases which have definite pathologic anatomy as their basis. My cases of angina pectoris are grouped as: (*a*) those caused by myocardial defects; (*b*) those caused by aortitis, and (*c*) those due to disease of the coronary arteries. Cases associated with syphilis also follow this classification. My estimate of syphilitic angina is a cautious one, because it is quite possible for a patient with active syphilis to have angina due to other causes. The series comprises no postmortem evidence, but I have endeavored to exclude all questionable cases. Nine instances of syphilitic angina pectoris were discovered in a total of 200 cases of angina pectoris. The oldest patient was 63; the youngest, 51. The average age was 52.6 years. Only one case occurred in a woman. In four instances a definite history of syphilis was obtained. In no case had early or thorough treatment been given. Angina never appeared less than twenty years after initial infection, which corresponds to other evidences of cardiac syphilis. Three patients had also marked generalized arterial disease, also probably syphilitic in origin.

In regard to the anatomic structure involved: Only two patients had aortic disease: dilatation and sclerosis of the arch with aortic endocarditis. Only one case evidenced positive myocardial disease. In two cases there were coronary emboli. In four the aorta and the heart muscle showed definite lesions. Three of these cases showed marked improvement under treatment. Both patients with coronary embolism died promptly. In the histories of all cases there was the factor of stressful life, emotional stress, and occupation carrying long continued nervous strain. Two instances showed hypertension and one, hypotension. In the others blood pressure was approximately normal. From a study of these cases it appears that typical angina pectoris is not a very frequent symptomatic manifestation of syphilitic cardiac disease, no more than with cardiac disease caused by other factors. I feel also that anginal symptoms do not usually occur as an early manifestation of syphilitic heart disease. The time has corresponded to the appearance of cardiovascular syphilis without angina.

Considerable benefit may be expected from vigorous and well adapted specific treatment. Symptomatic improvement may occur even in long standing lesions. As in other forms of syphilitic cardiovascular disease, treatment has been successful only in degree to the prominence given to the specific nature of the disease.

Jaundice and Liver Lesions in West African Yellow Fever

DR. OSKAR KLOTZ, Toronto: Yellow fever has a sudden onset with headache and prostration, vomiting occurring in the first twenty-four hours and persisting. Sometimes the vomitus is blood streaked or like coffee ground material. Albuminuria appears on the second day. Jaundice varies much. It is constant in some epidemics, but there is a variation in the period of time at which it appears. In many cases jaundice is fairly constant; it appears the third day and persists during convalescence. In the more severe cases, jaundice is delayed until the fifth to the seventh day, or it does not appear until convalescence sets in, when there is intense jaundice. In severe cases with intense intoxication, jaundice may not appear until the time of death and it is often more marked after death. There is also an odd leaden color accompanying the jaundice in severe cases. Studies were made on the tissues of thirty-five yellow fever cases. All cases showed a liver lesion—degeneration with evidence of intoxication of the parenchymatous tissues localized in the midzone of the lobule. The liver cells are destroyed or stand out as hyaline masses, not readily undergoing autolysis. The character of the cell change differentiates it from yellow atrophy and from the results of acute poisoning. The liver cell columns are picked out first. The stroma is intact. There is no thrombosis of the sinus. There is an acutely selective intoxication with reaction of the reticulo-endothelial Kupffer cells. The cells are actively phagocytic, and in seventy-two hours almost all the parenchyma of the liver is destroyed. The Kupffer cells also show severe degeneration with necrobiosis. The reticulo-endothelial cells are injured in other organs, such as the spleen. This looks as if the theory that the reticulo-endothelial cells play a part in the production of bile pigments is correct. When their function is markedly depressed, jaundice may be absent in this disease.

DISCUSSION

DR. WILLIAM H. WELCH, Baltimore: I am interested to note that Dr. Klotz has brought out evidence that African yellow fever is truly yellow fever. There have been skeptics. Dr. Gorgas was one. He did not like the idea that efforts should have to be extended to the West Coast of Africa, because he had an ideal of extermination of the disease. I am familiar with these cases. Sternberg brought a great deal of valuable material to our laboratory to study. This thrombosis in the midzone of the liver is most interesting. We suspected that there were intracellular areas in the liver resembling protozoa. Methylene and eosin brought these forms out distinctly. It brought out the earliest cell inclusions. Councilman's work on the Kupffer cells, however, was the real contribution to the subject. Dr. Klotz has confirmed Hoffman's statement as to the calcifications in the renal tubules. These have been considered almost pathognomonic, but they may exist in other conditions. I think no one has gone ahead of Councilman's work.

DR. OSKAR KLOTZ, Toronto: I am in agreement with Dr. Welch in emphasizing the work of Councilman. Our work has been on that basis. The point Hoffman described is a characteristic lesion of the kidney—lime casts in the tubules. That was found in 60 per cent of the West African cases. It was identical with findings in Havana and in South America. These lime casts of the kidney tubules were found in cases of African plague and also in acute poisoning. We were not equipped to carry out blood chemical examinations. There is a better field for this research in western central Africa, where the disease exists in a sporadic form and also in epidemics in which about 1,000 cases occur among, perhaps, 5,000 inhabitants.

(To be continued)

Current Medical Literature

AMERICAN

The Association library lends periodicals to Fellows of the Association and to individual subscribers to THE JOURNAL in America for a period of three days. No foreign journals are available prior to 1921, nor domestic prior to 1923. Periodicals published by the American Medical Association are not available for lending, but may be supplied on order. Requests should be accompanied by stamps to cover postage (6 cents if one and 12 cents if two periodicals are requested).

American Journal of Pathology, Boston

3: 93-178 (March) 1927

*Metastatic or Embolic Endometriosis, Due to Menstrual Dissemination of Endometrial Tissue into Venous Circulation. J. A. Sampson, Albany, N. Y.—p. 93.

*Finer Vascular Channels of Spleen. W. J. MacNeal, S. Otani and M. B. Patterson, New York.—p. 111.

*Islands of Langerhans in Human Pancreas: II. Significance of Variations in Structure. S. Otani, New York.—p. 123.

*Essential Suprarenal Insufficiency (Addison's Disease). E. M. Medlar, Madison, Wis.—p. 135.

Transplantation and Individuality Differential in Strains of Inbred Rats. L. Loeb and H. D. King, Philadelphia.—p. 143.

*Pyorrhea Alveolaris: Rôle of Certain Micro-Organisms Found in Lesions. J. H. Fisher, London, Ont.—p. 169.

Metastatic Endometriosis.—A histologic study was made by Sampson of sections of uteri removed during the various stages of the menstrual cycle, in which the veins had been injected with bismuth. By this means it was demonstrated that there are venous capillaries and large venous sinuses in the uterine mucosa and that the latter empty into similar sinuses (receiving) in the uterine wall. During menstruation, blood escapes from the mucosal vessels into the surrounding tissues, and bits of the mucosa are often set free in the extravasated blood. These studies suggest that this menstrual blood containing fragments of endometrial tissue at times escapes through a ruptured mucosal sinus into the venous circulation of the uterus. Sections of misplaced endometrial tissue, wherever situated and irrespective of its origin, also suggest that a like dissemination of fragments of this tissue occurs during menstruation.

Vascular Channels of Spleen.—MacNeal, Otani and Patterson propose a technic for the fixation and preservation of human spleens obtained by surgical splenectomy or at necropsy, which makes possible a more illuminating study of the structure of this organ. For the study of animal spleens a modified perfusion technic is described, in which the perfusion fluid or experimental injection material is introduced into a short gastric branch of the splenic artery.

Islands of Langerhans in Human Pancreas.—Otani asserts that the process of hypertrophy of the islands of Langerhans in the adult pancreas is mostly due to transformation and hyperplasia of acinar and centro-acinar cells, the hyperplasia of the island cells proper being relatively insignificant. The acinar cells are able to change into island cells, indicating a genetic relation between islands and acini. The new formation of the islands in the adult pancreas may occur by transformation and hyperplasia of the acinar, centro-acinar or duct cells.

Essential Suprarenal Insufficiency.—In the two cases reported by Medlar there was present a marked hyperplasia of the lymphoid apparatus, including the spleen in both cases and the thymus in the one case in which examination was possible. Neither case showed any clinical or pathologic evidence of hypofunction of the gonads. In the case of the female patient, pregnancy and healthy children had ensued. In the case of the male, the testes were functional and appeared normal in the gross and the microscopic examinations.

Pyorrhea Alveolaris; Bacteriologic Studies.—*Endameba gingivalis* was present in direct smears in 95.5 per cent of 201 cases of pyorrhea examined by Fisher. Evidence is submitted that this ameba is a harmless parasite. *B. fusiformis* and spirilla were found in the smears from all cases of pyorrhea studied, and in all the normal gums. *Streptococcus viridans* was present in each of thirty cases of pyorrhea examined culturally. Hemolytic streptococci were not present in any of the cases examined culturally, nor were hemolytic influenza bacilli.

American J. Roentgenol. & Rad. Therapy, New York

17: 305-404 (March) 1927

*Roentgenology of Alimentary Tract of Medical Student. T. W. Todd, Cleveland.—p. 305.

*Cholecystography: Oral Administration of Sodium Tetraiodophenolphthalein. J. S. Sproull, Haverhill, Mass.—p. 316.

*Pineal Shadow as Aid in Localization of Brain Tumors. J. H. Vastine, Philadelphia, and K. K. Kinney, Willimatic, Conn.—p. 320.

Metallic Roentgen Tube (Philips Metalix) and Determination of Permeability of Its Walls to Roentgen Rays. N. A. Podkaminsky, Charkow, Ussr.—p. 324.

New Uniform Potential Deep Roentgen-Ray Therapy Apparatus. A. Mutscheller, New York.—p. 328.

Inoperable Ovarian Tumor Treated by Method of E. G. Mayer: Roentgen Therapy Alone Ineffective; Combined with Glucose Injections Yielded Desired Effect; Radical Operations. G. Holzknecht, Vienna.—p. 332.

Radiotherapy of Cancer of Cervix at Radium Institute, Paris, France. M. Lenz, New York.—p. 335.

Carbon Arc and Flame Lamps in Medicine and Surgery. H. Goodman, New York.—p. 342.

Roentgen-Ray Anatomy of Alimentary Tract.—Todd made a roentgenologic study of the normal alimentary tract in healthy young male students. He says that all parts of the tract are exceedingly sensitive to emotional or nervous conditions. These influence different parts of the tract in divers directions. The stomach becomes atonic in outline, though not in movement or in emptying time. The duodenum shows pseudostasis. The transverse colon exhibits a spasm which may absolutely inhibit the onward passage of its contents. The sites of the cardia and pylorus are affected in similar manner, though not so greatly as are the positions of the greater curvature in the pyloric vestibule and the gastric tube. The normal position of the small intestine in the living individual, whether upright or horizontal, is in the lower abdomen and true pelvis; its disposition is in ladder coils. Peristalsis in the lower ileum may be exceedingly slow in spasm of the transverse colon, one wave taking half an hour to complete its cycle. The proximal colon (cecum, ascending colon, transverse colon) exhibits a peristaltic wave like those of the stomach and the small intestine. Its rate of progress in the transverse colon is about half that of stomachic peristalsis.

Cholecystography.—Sproull administers the dye in cream of wheat, giving 2 Gm. to patients of 150 pounds (68 Kg.) or under, and 3 Gm. to patients weighing more than 150 pounds. No special meal to empty the gallbladder is advised, and no cathartic preparation is given. The dye is dispensed to the patient in plain gelatin capsules, each containing 0.5 Gm. of the dye. At 8 p. m. all of the medicine contained in these capsules is added to four (or six) tablespoonfuls of cooked cream of wheat (cold). Nothing should be taken after midnight. At 8 a. m. films are taken, and the patient is dismissed until 1:30 p. m. with instructions to continue the fast from food and drink. At 1:30 p. m. the second series of films is taken, after which the patient is advised to eat a meal rich in fats, consisting usually of a dropped egg on buttered toast, a pudding with cream, and a cup of cocoa with cream, and to report two hours after for a third film. The method is said to yield excellent results. Of twenty-three patients studied, only three complained of nausea. Two vomited a little. Three had slight diarrhea. None were seriously inconvenienced.

Pineal Gland and Brain Tumors.—In endeavoring to establish a normal variation in the position of the pineal gland, Vastine and Kinney examined 350 skull films essentially negative for intracranial lesions. Two hundred of the films showed calcification of the pineal gland. The gland was displaced in 51 per cent of the patients with meningiomas. Acoustic neuromas were seen to cause displacement in 22 per cent of the cases. Hydrocephalus per se was observed to produce a displacement in 13 per cent of the cases. Pituitary adenomas were rarely seen to cause a change in position of the gland, displacement being observed in only 10 per cent of the cases. Intracranial hemorrhage caused displacement in two cases.

California and Western Medicine, San Francisco

26: 433-592 (April) 1927

Blood Transfusion in Pernicious Anemia. E. H. Falconer, San Francisco.—p. 465.
*Chronic Appendicitis. H. E. Butka, Los Angeles.—p. 467.
Diseases and Abnormalities of Female Urethra. W. E. Stevens, San Francisco.—p. 471.
*Insulin Treatment of Diabetic Coma. W. H. Leake, Los Angeles.—p. 475.
Perforated Ulcer of Duodenum. E. Butler and E. Carlsen.—p. 478.
Control of Urinary Hemorrhage. P. A. Ferrier, Pasadena.—p. 480.
Diagnosis of Genital Lesions. H. J. Templeton, Oakland.—p. 482.
*Treatment of Erysipelas by Roentgen Ray. J. E. Harbinson and J. D. Lawson, Woodland.—p. 485.
Congenital Atresia of Duodenum: Case. C. V. Thompson, Lodi.—p. 487.
Syphilis: When Is It Cured? I. R. Bancroft, Los Angeles.—p. 489.
Hypophysis Versus Hypothalamus. H. Lisser, San Francisco.—p. 490.
Staphylococcus Septicemia: Case. A. C. Reed and F. E. Stiles, San Francisco.—p. 492.

Chronic Appendicitis.—In Butka's opinion chronic appendicitis often is a clinical condition resting more on a functional than a pathologic basis. Obliterative and atrophic appendixes are the result of previous acute pathologic processes, and are not found in increased numbers in cases diagnosed clinically as "chronic appendicitis." The presence of eosinophils in the mucosa of the appendix is not an indication of chronic appendicitis, but is probably a link in the defensive mechanism and is normal. Eosinophils and leukocytes in the submucosa and muscularis are positive evidence of inflammatory changes in the appendix. Chronic appendicitis cannot be determined in more than an extremely small percentage of instances by the histologic examination alone. Complete data on gross conditions seen at operation are essential to a correct diagnosis.

Insulin Treatment of Diabetic Coma.—Fifty-three cases of diabetic coma are reported by Leake. Thirty-seven of these patients died. Eight died within twelve hours after admission. Twenty of the thirty-seven patients who died had grave complications, which were discovered at the time of examination or at necropsy. The highest blood sugar noted was 625 mg. per hundred cubic centimeters of blood; the lowest, 181 mg. Two patients had extremely low plasma carbon dioxide combining power, 9.9 volumes per cent; one recovered. One patient was admitted on three separate occasions in coma, recovery ensuing each time; another was admitted twice in coma, recovering each time, and one, a child aged 2½ years, died a few hours after his second admission for diabetic coma. Of the eleven patients who had been under insulin treatment prior to the onset of coma, only five recovered. The smallest quantity of insulin required to restore a patient to consciousness was 15 units in a child 2½ years of age. Many of the patients who received large doses of insulin remained stuporous for several days. Leake has found it unnecessary to administer more than 200 units to the average coma patient during the first twenty-four hours, but would not hesitate to give five times that amount if indicated. In addition to the liberal use of insulin, buffered with carbohydrate, the treatment of diabetic coma consists mainly in forcing fluids, warmth, elimination and stimulation with caffeine sodiobenzoate and digitalis. Not more than 25 Gm. of sodium bicarbonate should be administered daily.

Roentgen-Ray Treatment of Erysipelas.—Roentgen-ray therapy for erysipelas is regarded by Harbinson and Lawson as being a valuable form of treatment. Relief is obtained generally within twenty-four hours. The febrile period is shorter than in infections of equal severity treated by other measures, and the usual length of illness is shortened. There are, possibly, fewer complications and less chance of spread than in other forms of treatment. There is no pain or discomfort attending the treatment. Advanced, serious cases of erysipelas involving fairly large areas, with high temperature and general infection, may be treated successfully.

Georgia Medical Association Journal, Atlanta

16: 116-149 (April) 1927

Thyroid Diseases. T. C. Thompson, Vidalia.—p. 116.
Prostatic Surgery. J. W. Shearhouse, Savannah.—p. 122.
Treatment of Diabetic Coma. T. E. Rogers, Macon.—p. 124.
Gastric and Duodenal Ulcer: Management. J. B. Fitts, Atlanta.—p. 128.
Stricture of Urethra. W. P. Jordan, Columbus.—p. 131.
Midwife Problem. O. R. Thompson, Macon.—p. 135.

Journal of Bone and Joint Surgery, Boston

9: 217-380 (April) 1927

Central Sarcoma of Bone. J. C. Bloodgood, Baltimore.—p. 217.
*Back Injuries in Industrial Employees. R. F. Herndon, Springfield, Ill.—p. 234.
Results of Davis Method of Reduction of Congenital Hip Dislocation. D. P. Willard, Philadelphia.—p. 270.
*Specific Causative Factors of Multiple Infective Arthritis. L. G. Hadjopoulos and R. Burbank, New York.—p. 278.
Tuberculous Diaphysis. H. Ragolsky, Middleboro, Mass.—p. 286.
Bilateral Defect of Femoral Heads. C. W. Peabody, Detroit.—p. 288.
Treatment of Osteomyelitis. L. Thornton, Atlanta, Ga.—p. 294.
Radiography During Manipulation for Closed Reduction of Congenital Dislocation of Hip. S. W. Boorstein, New York.—p. 302.
Osteomyelitis of Scapula. G. A. Williams, Atlanta, Ga.—p. 308.
Histogenesis of Cartilage. H. T. Jones, Rochester, Minn.—p. 310.
Indications for Operative Treatment of Congenital Equinovarus Club-Foot. L. Ombredanne, Paris.—p. 315.
Cyst of External Semilunar Cartilage. S. Kleinberg, New York.—p. 323.
Lateral Subastragaloid Dislocation. H. D. Sonnenschein, New York.—p. 328.
*End-Results of Arthroplasty of Hip Joint. W. C. Campbell, Memphis, Tenn.—p. 331.
Surgical Treatment of Traumatic Spondylolisthesis. J. C. Wilson, Los Angeles.—p. 346.

Back Injuries in Industrial Employees.—Herndon has made a study of 941 consecutive cases of back injuries in industrial employees. Sprain occurred in 498 cases. About two thirds of the cases were located in the lumbosacral region. In about 11 per cent the condition seemed to be localized about the region of the sacro-iliac joint. The next most frequent site was the middle and upper lumbar regions, where about a fourth of the cases occurred. Contusions occurred in 122 cases. Fracture of the vertebral processes occurred in forty-one cases. In thirty-six cases the fracture involved one or more of the transverse processes. In about half of these the fracture was due to abnormal muscular pull, and in about half to direct violence. Fracture of the vertebral bodies occurred in thirty cases, or 3 per cent. Many of these followed what seemed to be slight accidents, and were surprisingly devoid of symptoms. Chronic deforming arthritis was found in 107 cases. A neurosis was diagnosed in eleven cases. Malingering occurred in thirty-five cases. In ninety-seven cases, the condition of the back and the symptoms complained of seemed entirely attributable to disease. Variations in the spine from the normal or textbook anatomy occurred in 4.8 per cent of the cases in the lumbosacral region. The most common anomalies were split spinous processes, usually of the first sacral vertebra, and sacralization of the fifth lumbar vertebra.

Cause of Multiple Infective Arthritis.—Hadjopoulos and Burbank suggest that the main primary cause of chronic rheumatoid arthritis seems to be a highly selective group of streptococci. In the symptom complex of chronic rheumatoid arthritis, a secondary rôle may be played by diphtheroid bacilli, bacilli of the para-colon group, and *Staphylococcus aureus*.

Arthroplasty of Hip Joint.—Of fifteen arthroplasties for ankylosis of one hip done by Campbell, excellent results occurred in ten. In only two cases has ankylosis recurred. Of the ten with excellent results, ankylosis was probably caused in five by the gonococcus. In all cases there is stability, endurance and efficiency.

Journal of Experimental Medicine, Baltimore

45: 571-751 (April 1) 1927

Comparative Pathology of South African Jagziekte and Montana Progressive Pneumonia of Sheep. E. V. Cowdry and H. Marsh, New York.—p. 571.
*Transplantation of Guinea-Pig Suprarenal and Functioning of Grafts. H. L. Jaffe, New York.—p. 587.
*Influence of Thyroidectomy, Splenectomy, Gonadectomy and Suprarenalectomy on Development of Experimental Atherosclerosis in Rabbits. S. Shapiro, New York.—p. 595.
*Production of Purpura by Derivatives of Pneumococcus: III. L. A. Julianelle and H. A. Reimann, New York.—p. 609.
*Relation of Reticulo-Endothelial System to Formation of Amyloid. H. Smetana, Peking, China.—p. 619.
Changes in Carbon Dioxide Tension and Hydrogen Ion Concentration of Blood Following Multiple Pulmonary Embolism. C. A. L. Binger and R. L. Moore, New York.—p. 633.
Effect of Multiple Emboli of Capillaries and Arterioles of One Lung. C. A. L. Binger, D. Boyd and R. L. Moore, New York.—p. 643.

*Resistance to Flow of Blood to and from Lungs. R. L. Moore and C. A. L. Binger, New York.—p. 655.
Physical and Chemical Properties of Virus of Foot and Mouth Disease: I. P. K. Olitsky and L. Boëz, Strasbourg, France.—p. 673.
Id.: II. P. K. Olitsky and L. Boëz, Strasbourg, France.—p. 685.
*Complement Fixation in Tuberculosis: III. P. A. Lewis, Princeton, N. J.—p. 701.
Immunity to Pneumococcus Mucosus (Type III): I. W. S. Tillett, New York.—p. 713.
*Influence of Light on Transplantable Neoplasm of Rabbit. L. Pearce and W. H. Brown, New York.—p. 727.

Experimental Transplantation of Suprarenal.—Jaffe asserts that the suprarenal cortex of the guinea-pig can be transplanted autoplastically into the abdominal wall and may remain for months, growing to fairly large size. It can be transplanted homoplastically but these transplants usually degenerate after a few months. Small autoplastic transplants are capable of maintaining the life of a completely suprarenalectomized guinea-pig for weeks, and large transplants maintain the animal indefinitely in good condition. Irritation phenomena follow the grafting of suprarenal cortex because of the entrance of epinephrine into this tissue during the manipulation involved in removal of the gland.

Experimental Atherosclerosis.—Evidence is presented by Shapiro which indicates that alimentary hypercholesterolemia acting over a sufficient period of time (in rabbits with all organs intact, 110 days or longer) causes deposition of cholesterol within the intima of the aorta. Deposition of cholesterol within the intima of the aorta initiates the formation of experimental atheromas. Thyroidectomy, splenectomy, and gonadectomy augment hypercholesterolemia, and thereby facilitate and accelerate the development of experimental atheromas of the aorta in rabbits. Sublethal suprarenal insufficiency does not increase the susceptibility of rabbits to the development of such atheromas.

Production of Purpura by Pneumococcus.—Julianelle and Reimann state that the purpura-producing principle of pneumococcus is nonantigenic in the sense that it does not stimulate the formation of antibodies. It does not exist preformed in the cell, but is rather an autolytic derivative, since it is formed only when pneumococci undergo autolysis, and is not found when the autolytic ferments are inactivated. The purpura substance is associated with the proteose fraction of active pneumococcus extracts.

Reticulo-Endothelial Cells Form Amyloid.—The facts presented by Smetana suggest strongly that reticulo-endothelial cells are actively concerned in the formation of amyloid.

Resistance to Flow of Blood by Lungs.—It is shown by Moore and Binger that the embolism of pulmonary arterioles and capillaries produced by the intravenous injection of starch grains results in a dilatation of the pulmonary artery and the right chambers of the heart.

Complement Fixation in Tuberculosis.—Lewis avers that the prolonged extraction of the tubercle bacillus with boiling ethyl alcohol, followed by one or more reprecipitations by chilling the hot alcoholic solution, easily yields a preparation very active as antigen in the complement fixation reaction. This preparation gives a precipitation reaction with a high dilution of the normal blood serum of a number of species. The precipitation reaction presents as a peculiar feature a very long prozone, and is further dependent on a preceding heat treatment of the serum for its demonstration. Since it occurs as a reaction of normal serum, the reaction is apparently not influenced by immunization sufficient to develop moderate specific complement fixation reactions.

Influence of Light on Transplantable Neoplasms.—Experiments are reported by Pearce and Brown in which an environment of constant and continuous light with a wave length from 3,022 to 5,790 angstrom units, supplied by mercury arcs in crown glass, and of constant darkness, have influenced the course and character of a malignant disease of rabbits induced by a transplantable neoplasm. Under the influence of constant light the level of malignancy was lower than in control animals living under ordinary conditions of diffused sunlight. Under the influence of constant darkness the level of malignancy was somewhat lower than in the control animals, but the effect of this environment was modified by the special character of the disease prevailing at this time. The incidence of bone metastases was unusually high, but it was greatly increased in the rabbits kept in constant darkness. These observations furnish experimental evidence in support of the belief that there is a correlation between the external factor of light and the manifestations of an experimental malignant disease.

Journal of Industrial Hygiene, Baltimore

9: 109-168 (April) 1927

Silicosis of South African Gold Mines: Changes Produced by Legislative and Administrative Efforts. W. Watkins-Pitchford, London.—p. 109.
*Experimental Electric Shock. R. W. I. Urquhart, Toronto.—p. 140.

Experimental Electric Shock.—The experiments made by Urquhart confirm the deductions of previous observers as to the cause of death in electric shock; namely, that it may be due to primary cardiac failure, to primary respiratory failure, or to a combination of both. In laboratory animals, when the current traverses the body from the head to a hind limb, about 45 per cent of the deaths are of purely cardiac origin. The remainder of the deaths occur because of failure of the respiratory movements. In these, as in the group in which the current is passed directly through the brain, a condition of profound paralysis or block becomes established in the respiratory, vagus and vasomotor centers. That the block involves these centers is shown by experiments which demonstrate clearly the absence in electrocuted animals of reflex effects normally functioning through them. Since the nerve centers become insensitive to extraneous influences, counter stimulation is not an aid to recovery. No definite histologic changes can be made out in the brain to account for the symptoms. The capillary hemorrhages which occur do not appear to be significant. These experiments also show definitely that when the electric current does not cause charring of nerve structures, the paralysis or block is recovered from and the reflexes return, provided efficient artificial respiration is applied. It is of the greatest importance that artificial respiration be applied early and be maintained for a sufficient length of time. Owing to the nature of the block in the nerve centers, the ordinary tests for death should not be accepted and "nothing less than cooling of the body or the onset of rigor mortis should be considered to be evidence of death."

Kansas Medical Society Journal, Topeka

27: 111-144 (April) 1927

*Study of One Thousand Stillbirths. E. G. Brown, Topeka.—p. 111.
Part-Time Health Officer. O. E. Stevenson, Oswego.—p. 113.
Twenty-Four Hours with General Practitioner. I. J. Wolf, Kansas City, Mo.—p. 115.

Stillbirths in Kansas.—Brown's study shows that the stillbirth rate for Kansas has remained practically stationary for the last ten years. Although a definite study was not made as to the economic status, there is probably a direct relationship between the earnings of the father and the occurrence of stillbirths in his family. Many of the stillbirths could be prevented if the pregnant woman were under adequate medical supervision during the pregnancy.

Minnesota Medicine, St. Paul

10: 205-266 (April) 1927

Cancer of Rectum. R. C. Coffey, Portland, Ore.—p. 205.
More Common Rectal Complications of Pregnancy. W. A. Fansler, Minneapolis.—p. 212.
*Nature of Glossitis in Pernicious Anemia. J. P. Schneider and J. B. Carey, Minneapolis.—p. 214.
Periodic Health Examination. A. M. Snell, Rochester, Minn.—p. 222.
*Osteitis Fibrosa Cystica: Case. W. H. Ude, Minneapolis.—p. 228.
Evolution of Nephritis: II. H. O. Altnow, Minneapolis.—p. 231.

Streptococcus Cause of Glossitis of Pernicious Anemia.—Schneider and Carey have verified Hunter's clinical observations on the tongue phenomena in pernicious anemia. By applying the biopsy method of study to this organ, they have made in the living the same histologic observations that Hunter made in the dead, and have advanced the knowledge of the type of coccus responsible by means of bacteriologic studies, demonstrating in nine specimens the uniform finding of a streptococcus of the viridans group.

Osteitis Fibrosis Cystica.—The case reported by Ude necessitated a very interesting differential diagnosis from osteitis

V 19

deformans, and adds support to the correlation of the two diseases, as advocated by Knaggs in 1925.

Missouri State Medical Association Journal, St. Louis

24: 129-178 (April) 1927

*Colonic Reaction in Food Allergy. C. H. Eyermann, St. Louis.—p. 129.
Subclavian Aneurysm: Ligation of Artery at First Portion. W. C. G. Kirchner, St. Louis.—p. 135.
*Typhoid Fever. E. W. Saunders, St. Louis.—p. 138.
Collapse Therapy in Pulmonary Disease. J. J. Singer, St. Louis.—p. 139.
Prostatic Hypertrophy. N. S. Moore, St. Louis.—p. 143.
Chronic Duodenal Inflammation and Traumatization. F. E. Diemer, Kansas City.—p. 146.
Pernicious Anemia. A. S. Welch, Kansas City.—p. 148.

Colonic Reaction in Food Allergy.—Eyermann reports a case with symptoms simulating gallbladder disease, but with evidences of allergy. The case was studied after the administration of whole wheat bread which never failed to produce gastro-intestinal symptoms, of which pain was the outstanding feature. These attacks were relieved by the hypodermic administration of epinephrine chloride, 1:1,000. The roentgen ray revealed spasticity of the colon, which was relieved by the hypodermic administration of epinephrine. Eyermann concludes that this case was one of hypersensitiveness affecting the intestinal musculature, and may be classified in the group usually known as intestinal or abdominal allergy. Colonic spasticity may be a factor in the production of abdominal pain in this type of disorder.

Mercurochrome in Typhoid.—Saunders commends the intravenous administration of mercurochrome in the treatment of typhoid, combined with guaiacol inunction. Pure guaiacol rubbed into the skin, in the dose proportioned to age, and always followed by an oil rub to prevent irritation, he says, will reduce the temperature in typhoid and tuberculosis infection, and also in cases of uncomplicated pneumococcus pneumonia.

New Jersey Medical Society Journal, Orange

24: 213-274 (April) 1927

Nutrition of Children. A. E. Siegel, Philadelphia.—p. 213.
Typhoid Fever: Its Influence on Communities. C. L. Andrews, Atlantic City.—p. 217.
*Sgambati Urine Test in Peritonitis. R. A. Kilduffe, Atlantic City.—p. 221.
Heliotherapy. M. Shapiro, Bayonne.—p. 222.
Light as Exciting Agent in Lupus Erythematosus and Other Dermatoses. H. Feit, Newark.—p. 226.
Physiotherapy in Hackensack Hospital. S. T. Snedecor, Pathogue, N. Y. —p. 229.
Is Civilization Advancing? A. MacAlister, Camden.—p. 239.

Sgambati Urine Test in Peritonitis.—The Sgambati reaction was applied by Kilduffe to a series of 571 albumin-free urines submitted for routine examination in an endeavor to ascertain whether positive reactions were to be found with undue frequency in the absence of peritonitis, and also, as opportunity offered, to determine the frequency with which it was encountered in the presence of peritonitis. The specimens were obtained from unselected patients with a variety of medical, surgical and gynecologic conditions. In 556 cases not showing clinical or other evidence of peritonitis, negative reactions were found in 554. The two positive reactions occurred in a case of gastric ulcer with hemorrhage in which clinical or other evidence of peritonitis was not obtainable. This patient had repeated hemorrhages, as a result of which he died. There were fifteen cases of known peritonitis in addition to the cases noted above, in none of which a positive reaction was obtained.

New Orleans Medical and Surgical Journal

79: 713-796 (April) 1927

*Passing of Malaria. C. C. Bass, New Orleans.—p. 713.
Operation of Sheppard-Towner Act in Louisiana. O. Dowling, New Orleans.—p. 719.
Foreign Bodies in Intestine. D. I. Hirsch, Monroe, La.—p. 728.
Meaning of Blood in Urine. B. M. McKoin, Monroe, La.—p. 733.
Relation of General Hospital to Tuberculosis. J. M. Mosely, Shreveport, La.—p. 737.
Activities of U. S. Public Health Service in South. J. McMullen, Louisville, Ky.—p. 743.
Surgical Diagnosis and Treatment. I. Cohn, New Orleans.—p. 748.
Low or Cervical Cesarean Section. H. E. Miller, New Orleans.—p. 753.
Hodgkin's Disease. J. A. Lanford, New Orleans.—p. 757.

Passing of Malaria.—Bass is convinced that malaria is rapidly passing as an important disease of this country. At the present rate, within another decade or two, it will be a negligible disease, except, perhaps, in certain very limited areas where special circumstances may result in its remaining for a longer time.

New York State Journal of Medicine, New York

27: 335-390 (April 1) 1927

*Stricture of Ureter. C. K. Church, New York.—p. 335.
Treatment of Cancer of Uterine Body. H. Bailey, New York.—p. 348.
*Pregnancy and Diabetes. B. D. Bowen, Buffalo.—p. 351.
Public Health Progress in Twenty-Two Countries. E. Parkhurst, Albany. —p. 358.

Stricture of Ureter.—Church presents an analysis of 100 cases of stricture of the ureter, and reviews the literature on this subject.

Pregnancy and Diabetes.—In the seven cases reported by Bowen, five patients required insulin before, during and after pregnancy. In these five cases, pregnancy would have been impossible without insulin, as the diabetes was of several years' duration. The two patients who did not need insulin were obese. Bowen is convinced that diabetes complicated by pregnancy, particularly if the diabetes is mild, can be carried through successfully if the patient is kept under the strictest supervision. In the event of serious complications, the pregnancy should be terminated immediately, preferably by cesarean section.

Northwest Medicine, Seattle

26: 181-226 (April) 1927

Calcium Metabolism and Parathyroids. C. F. Davidson, Seattle.—p. 181.
Signs of Endocrine Dystrophies. T. H. Coffen and H. P. Rush, Portland, Ore.—p. 186.
*Rôle of Endocrines in Nervous Diseases. R. B. Tracy, Seattle.—p. 188.
Thyroid Gland. L. A. Steeves, Salem, Ore.—p. 191.
Goiter. J. C. Moore, Seattle.—p. 194.
Exophthalmic Goiter. A. S. Graham, Seattle.—p. 199.
Surgical Versus Roentgen-Ray Treatment of Hyperthyroidism. G. H. Wahle, Boise, Idaho.—p. 202.
Infections of Accessory Nasal Sinuses: Cause of Chronic Nontuberculous Bronchitis. F. B. Kistner, Portland, Ore.—p. 203.
Preoperative and Postoperative Care of Cataract Cases. L. L. McCoy, Seattle.—p. 207.
Corneal Ulcers. R. H. Fisher, Rigby, Idaho.—p. 210.
Fibroma of Right Lacrimal Gland. L. H. Klemptner, Seattle.—p. 212.
Prolapse of Colon Through Colostomy Opening. E. M. Bevis, Tonasket, Wash.—p. 213.
Fracture of Articular Process of Lower Jaw. C. C. Wallin, Lewistown, Mont.—p. 214.

Rôle of Endocrines in Nervous Diseases.—Tracy asserts that there has never come to his notice for treatment a patient with compulsion, phobia, hysteria, anxiety neurosis or neurasthenia who has not at some time shown a temporary or more often permanent thyroid or suprarenal disturbance. About 30 per cent of the cases of psychoneurosis show symptoms of thyroid involvement with evidence of iodine poisoning.

Ohio State Medical Journal, Columbus

23: 271-350 (April 1) 1927

Pneumothorax Treatment of Lung Abscess. J. P. Anderson, Cleveland. —p. 291.
*Acute Sphenoid Sinus Infections. W. Mithoefer, Cincinnati.—p. 296.
*Oil-Ether (Colonic) Analgesia in Obstetrics. L. L. Hoskins, Cleveland. —p. 300.
Chronic Osteitis of Semilunar Bone (Kienboch's Disease). J. J. Kurlander, Cleveland.—p. 303.
Teratoma of Ovary Containing Thyroid Tissue. J. A. Riebel and F. A. Riebel, Columbus.—p. 304.

Acute Sphenoid Sinus Infections.—Mithoefer is of the opinion that acute sphenoid sinus disease is of frequent ocurrence, but because of the rapid and cursory examination of acute nasal infection an involvement of this cavity is often overlooked.

Oil-Ether Analgesia in Obstetrics.—Hoskins injects one-sixth grain (0.01 Gm.) of morphine sulphate in 2 cc. of a 50 per cent solution of magnesium sulphate. From twenty to thirty minutes later, a mixture of quinine sulphate, 10 grains (0.65 Gm.); alcohol, 2 drachms (7.5 cc.); ether, 2½ ounces (75 cc.), and olive oil, 4 ounces (120 cc.), is injected into the rectum by means of a large glass syringe to which is attached

a number 17 size catheter. The latter, being well lubricated with petrolatum, is inserted from 4 to 6 inches into the rectum, the time consumed being from one to two minutes. As a rule, the patient is drowsy in from five to ten minutes, and in from fifteen to twenty minutes she is asleep. This form of analgesia can be used with comparative safety, hospitalization of cases not being necessary for its use. Labor, as a rule, is prolonged in multiparas, and also occasionally in primiparas. Most primiparas require two or more instillations if analgesia is to be afforded through the second stage of labor. The instillations are best omitted with multiparas, or else given in reduced quantity unless a prolonged or difficult labor is expected.

Philippine Journal of Science, Manila

32: 103-271 (Feb.) 1927

Tropical Fusaria. O. A. Reinking, Boston, and H. W. Wollenweber, Berlin.—p. 103.

Physical Therapeutics, Baltimore

45: 117-164 (March) 1927

Treatment of Infantile Paralysis. H. E. Stewart, New Haven, Conn.—p. 117.

Periodic Health Examinations. W. B. Snow, New York.—p. 125.

Use of Static Currents. C. R. Brooke, New York.—p. 139.

Treatment of Diabetic Injuries. F. T. Woodbury, New York.—p. 151.

Surgical Diathermy Hemorrhoid Clamp. W. Bierman, New York.—p. 152.

Society Exper. Biol. & Med. Proc., New York

24: 465-625 (March) 1927

Effects of Synthetic Diets on Fertility and Lactation. E. Tso, New Haven, Conn.—p. 465.

Relationship of Reticulo-Endothelial System to Kala-Azar. C. H. Hu and J. R. Cash, Peking.—p. 469.

Antigenic Character of Denatured Egg Albumin. H. Wu, C. T. Broeck and C. P. Li, Peking.—p. 472.

Period of Induction in Blood Clotting. C. A. Mills, Peking.—p. 473.

Action of Pseudo-Ephedrine on Kidney. B. E. Read, C. Y. Pak and P. Mar, Peking.—p. 474.

*Presence of Aluminum in Blood. J. W. Mull, D. B. Morrison and V. C. Myers, Iowa City.—p. 476.

Respiratory Function of Swimbladder in Lepidosteus. G. E. Potter, Iowa City.—p. 477.

Hydrogen Ion Concentration and Carbon Dioxide Content of Blood of Parathyroidectomized Dogs. W. F. Wenner and E. Muntwyler, Iowa City.—p. 480.

Metabolic Rate Differences in Amblystoma Larvae. O. M. Helff, New Haven, Conn.—p. 482.

Effect of Some Capillary Active Substances on Permeability of Collodion Membranes. E. R. Norris, Iowa City.—p. 483.

*Cough as Factor in Chronicity of Experimental Lung Abscess. C. M. Van Allen, R. A. Fox and H. G. Colle, Iowa City.—p. 485.

*Skin Reacting Substances in Filtrates of Cultures of Eberthellia Typhi. M. S. Fleisher and E. J. Tierney, St. Louis.—p. 490.

*Fat Embolism. E. P. Lehman, St. Louis.—p. 491.

Action of Aldehydes on Histamine and on Active, Histamine-Like Substances Produced by Gas Bacillus. A. I. Kendall, St. Louis.—p. 492.

Pathologic Changes in Arteries Following Partial Denervation. A. H. Kerper and W. D. Collier, St. Louis.—p. 493.

Overgrowth of Connective Tissue Cells in Infected Wounds. M. T. Burrows, St. Louis.—p. 495.

*Bacteriologic Characteristics of Monilia Found in Pernicious Anemia and Other Pathologic Conditions. O. Garcia, C. Carcia, N. Boyce and G. O. Broun, St. Louis.—p. 497.

*Simultaneous Cholecystography and Determination of Liver Function. W. H. Cole, St. Louis.—p. 500.

Effect of Potassium Iodide and Thyroid Extract on Thyroid Gland of Guinea-Pig. S. H. Gray, F. L. Haven and L. Loeb.—p. 503.

Effect of Carbon Arc Radiation on Circulation in Dog. H. Laurens and H. S. Mayerson, New Orleans.—p. 506.

Action of Bacilli of Paratyphoid, Dysentery and Metadysentery Groups on Various Starches. A. Castellani, New Orleans.—p. 509.

"Symbiotic Fermentation Phenomenon": Its Use in Differentiation of Micro-Organisms and Identification of Carbon Compounds. A. Castellani, New Orleans.—p. 511.

Use of Ionized Gas Electric Lamps as Recorders in Measuring Velocity of Pulse Wave. R. H. Turner.—p. 516.

*Immunity to Measles. J. H. Musser, New Orleans.—p. 518.

*Etiology of Measles. C. W. Duval and R. J. Hibbard, New Orleans.—p. 519.

*Experimental Production of Carcinoma-Like Epithelial Metaplasia in Mammary Gland of Dog. W. H. Harris, New Orleans.—p. 522.

Experimentally Induced Large Variations in Urinary Proteins in Bright's Disease, Particularly in Nephrosis. H. Berglund and G. Medes, Minneapolis.—p. 528.

Correlation of Loaf Volume with Peptizing Action of Salts on Wheat Flour Proteins. R. A. Gortner.—p. 530.

Physiologic Consideration of Sphincter of Ductus Choledochus. F. C. Mann and G. M. Higgins, Rochester, Minn.—p. 533.

Problem of Seedling Mortality. J. A. Harris, Minneapolis.—p. 534.

Decorticate Rigidity. N. J. Berkwitz, R. E. Morris, F. H. Scott and J. C. McKinley, Minneapolis.—p. 536.

*Carbohydrate Metabolism of Suprarenalectomized Rats. C. F. Cori and G. T. Cori, Buffalo.—p. 539.

*Bacteriologic Studies in Acute Rheumatic Fever. K. E. Birkhaug, Rochester, N. Y.—p. 541.

Apparent Effect of Diphtheria Toxin on Growth of Bacteria. J. M. Sherman, C. N. Stark and P. W. Stark, Ithaca, N. Y.—p. 545.

*Destruction of Botulinum Toxin by Intestinal Bacteria. J. M. Sherman, C. N. Stark and P. W. Stark, Ithaca, N. Y.—p. 546.

Labile Sulphur of Insulin. V. du Vigneaud, Rochester, N. Y.—p. 547.

Study of Muscular Activity of Intestinal Segment During Perfusion Through Its Lumen. J. B. Polansky, Rochester, N. Y.—p. 548.

*Depancreatized Dogs Kept Alive Several Months with Insulin Administered by Stomach Tube. J. R. Murlin, Rochester, N. Y.—p. 549.

Antagonism of Pressor Action of Ephedrine by Cocaine. F. de Eds, San Francisco.—p. 551.

Specificity of Hepatic Anaphylatoxins. W. H. Manwaring, H. D. Marino, T. C. McCleave and T. H. Boone, San Francisco.—p. 553.

Anaphylactic Detoxication of Specific Proteins. W. H. Manwaring, H. D. Marino, T. C. McCleave, T. H. Boone and E. V. Orsborn, San Francisco.—p. 554.

Toxic Substances in Friedländer's Bacillus Cultures. B. L. Friedlander and P. Schoenholz, San Francisco.—p. 555.

Pharmacology of Veratrum Californicum. P. J. Hanzlik and F. de Eds, San Francisco.—p. 557.

Dissociation Constants of Hexosephosphoric Acids. L. Irving and E. Fischer, Frankfurt a. Main, Germany.—p. 559.

Influence of Thyroid and Insulin Treatment on Lactacidogen Synthesis in Muscle. L. Irving and H. J. Deuticke, Frankfurt a. Main, Germany.—p. 559.

Induction of Precocious Sexual Maturity in Mouse by Daily Pituitary Homeotransplants and Heterotransplants. P. E. Smith and E. T. Engle, San Francisco.—p. 561.

Regeneration of Rodent Peridental Membrane. T. D. Beckwith, A. Williams and W. C. Fleming, San Francisco.—p. 562.

Pulse Pressure, Its Probable Relationship to Stroke Volume. J. M. Read, San Francisco.—p. 564.

Use of Cathode Ray Oscillograph for Electrocardiography. W. Dock, San Francisco.—p. 566.

Transformation of Lymphocytes of Thoracic Duct into Polyblasts (Macrophages) in Tissue Culture. W. Bloom, Chicago.—p. 567.

*Development of Nongranular Leukocytes (Lymphocytes and Monocytes) Into Polyblasts (Macrophages) and Fibroblasts in Vitro. A. A. Maximow, Chicago.—p. 570.

Experimental Obstruction of Mesonephric Ducts. E. A. Boyden, Chicago.—p. 572.

Relations Between p_H, Agglutination and P. D. with Bacterium Phaseoli Soiense. I. S. Falk, C. G. Sharp and G. K. K. Link, Chicago.—p. 576.

Production of Toxic Substances in Vitro by Fusarium Lycopersici. B. E. Kane and G. K. K. Link, Chicago.—p. 578.

Organic Chlorides of Tissues and Possible Relation to Gastric Hydrochloric Acid Formation. M. E. Hanke and P. B. Donovan, Chicago.—p. 580.

Postural Apnea in Duck. T. Koppányi and N. Kleitman, Chicago.—p. 582.

Regulation of Flow of Bile: III. Rôle of Gallbladder. G. E. Burget, Chicago.—p. 583.

What Causes Psychic Secretion of Saliva in Dog? N. Kleitman, Chicago.—p. 585.

*Effect of Intraperitoneal Magnesium Sulphate on Parathyroidectomized Rats. F. T. Jung and F. Cook, Chicago.—p. 586.

*Effect of Venostasis on Heart Failure with Particular Reference to Cardiac Asthma. C. S. Danzer, New York.—p. 588.

Morphologic and Chemical Studies of Blood in Chronic Duodenal Obstruction. B. N. Berg, A. Wuorinen and J. W. Jobling, New York.—p. 590.

Toxicity of Filtrates of Staphylococcus Aureus from Human Infections and from Normal Nasopharynx. F. A. Stevens and L. Carp, New York.—p. 592.

*Filtration Experiments with Bacteriophage Employing Physiologic Filter: Pia, Dura and Arachnoid. E. B. McKinley and M. Holden, New York.—p. 595.

*Liver Injury in Acute Alcoholic Poisoning. R. P. Wallace, New York.—p. 598.

Effect of Antipneumococcus Serums on Leukocytes in Vitro and on Agglutination of Red Blood Cells. J. G. M. Bullowa, M. B. Rosenbluth and A. K. Merkin, New York.—p. 600.

New Agglutinable Factor Differentiating Individual Human Bloods. K. Landsteiner and P. Levine, New York.—p. 600.

Extraction of Precipitable Substances of Bacilli. J. Furth, New York.—p. 602.

Antigenic Composition of Water Extracts of Tubercle Bacillus. L. Dienes, Asheville, N. C.—p. 603.

Local Sensitiveness of Tuberculous Guinea-Pigs Against Egg White Similar to Arthus Phenomenon. L. Dienes and E. W. Schoenheit, Asheville, N. C.—p. 606.

Permeability of Placenta of White Rat to Specific Hemolysin. C. M. Boucek, Pittsburgh.—p. 607.

Hormone Content of Placenta and Chorionic Membranes. E. Allen, Columbia, Mo.—p. 608.

Degeneration in Vitro of Leukocytes and Connective Tissue Cells Under Influence of Light. W. R. Earle, Nashville, Tenn.—p. 611.
Experimental Production of Showers of "Nonmotile" Leukocytes. L. A. Beard and J. W. Beard, Nashville, Tenn.—p. 614.
Relation of Calcium to Toxicity of Carbon Tetrachloride in Dogs. A. S. Minot, Nashville, Tenn.—p. 617.
*Pharmacology of Ergothioneine. M. L. Tainter, Baltimore.—p. 621.
Automaticity and Mechanical Work in Anoxybiontic State of Frog's Heart: Quantitative Estimation of Natural Excitations. L. Asher, Berne, Switzerland.—p. 622.
Ionization of Calcium Citrate. M. J. Shear and B. Kramer, New York. —p. 624.

Presence of Aluminum in Blood.—Analyses for aluminum have been made by Mull et al. on the blood of thirteen miscellaneous hospital cases and on pig's blood. In all instances the amount of aluminum was less than 0.2 mg. per hundred cubic centimeters. When larger quantities of blood (from 10 to 30 cc.) were used, the results appeared to be somewhat lower. Excellent recoveries of added aluminum have been obtained.

Cough and Lung Abscess.—The experimental data reported by Van Allen et al. indicate: (1) that in dogs an infected embolus in the lung does not always result in abscess, at least when this strain of organism is used; (2) that the disease is characterized by absence of cough and rapid healing, and (3) that when the factor of cough is supplied, the cavities which form may be much larger and may persist much longer.

Skin Reacting Substances of Typhoid Bacillus.—Fleisher and Tierney report that following the injection of 0.1 cc. of the filtrate of a broth culture of typhoid bacilli intracutaneously in the arm of a human being, there appears in from twelve to twenty-four hours a reaction similar to that produced by the injection of *Streptococcus scarlatinae* toxin. The reaction fades after from twenty-four to forty-eight hours, but may leave a slight pigmentation. The reactions produced in subjects who neither had had typhoid nor were ever immunized against typhoid are very variable. No evidence of any ability to inhibit the local reaction was noted in persons who had had typhoid, or who had been immunized against typhoid. In individuals with typhoid, the reaction to the injection of the filtrate was markedly diminished (as compared with weakly reacting normal individuals) or was negative. During the early period of the disease the reaction might be distinct; in the second or third week the reaction was usually diminished or negative. After convalescence, the reaction began again to become positive. The ability of the organism to neutralize the local action of the typhoid filtrate was apparently evanescent, and confined to the actual period of the disease.

Fat Embolism.—Experiments are reported by Lehman showing that certain artificial emulsions can be broken down by the addition of necrotic muscle extract, peptone and histamine, besides other substances. It is emphasized that no significance has heretofore been placed on the physical state of the normal fat in the blood stream. The possible relationship of clinical fat embolism to the presence of protein split products in the blood stream is suggested by the breaking down of artificial emulsions by these substances.

Monilia and Pernicious Anemia.—This study made by Garcia et al. of the sugar fermentation reactions of the strains of *Monilia* isolated from cases of pernicious anemia shows that all act on dextrose, levulose, maltose, galactose, dextrin and sucrose. The action on lactose, mannite and insulin varies with the different strains. These reactions can be used to distinguish these organisms from various stock strains of yeasts. They resemble closely those given by the stock strains of *Monilia psiliosis*. *Monilia* isolated from other pathologic conditions seems, in general, closely related to the pernicious anemia strains in type of growth and fermentation reactions, although some slight differences are found in many strains.

Cholecystography and Liver Function Test.—Cole uses phenoltetraiodophthalein. The dose is 0.04 Gm. per kilogram of body weight, and is preferably given in the morning intravenously on an empty stomach. The dose need not exceed 2.5 Gm. Lunch should be omitted, but if hunger demands, the diet should be limited to liquids without fats and low in proteins. Water is allowed. Roentgenograms are taken four, eight and twenty-four hours after the injection. A specimen of blood is taken before giving the dye, and one-half hour afterward. Retention of less than 15 per cent of the dye in the blood serum one-half hour after injection of the dye, and less than 4 per cent one hour after injection is considered normal. Retentions of any greater amounts for the specified time are considered abnormal. The largest amounts of retention have been found in patients having cirrhosis with ascites, and may be as high as from 80 to 90 per cent one-half hour after injection. Retentions almost as great have been seen in patients having acute hepatitis with cholangitis, usually with slight jaundice. A mild retention above normal, ranging between 17 and 35 per cent, is found in cases of cholecystitis.

Immunity to Measles.—Musser states that the toxic filtrate of a bouillon culture of organisms isolated by blood culture when injected intradermally into susceptible individuals causes a transient erythema, whereas in persons who have had measles, the skin reaction is negative. This is confirmatory proof that there is a specific, now isolated, organism of measles which produces a toxin that may be used as an index of immunity to the disease.

Etiology of Measles.—In the cultures prepared by Duval and Hibbard from the blood of six patients with measles, a small gram-positive diplococcus was recovered in pure culture on sheep serum agar. The cultivated coccus completely corresponds in all six instances, and also to that of Tunnicliff. In no instance was there encountered any micro-organism other than the coccus described.

Experimental Carcinoma.—Histologic pictures like those of cancer have been produced by Harris by causing deranged epithelial cell relationship through nipple and gland inversion, although its nodules have thus far not demonstrated the usual functional activities of cancer.

Carbohydrate Metabolism After Suprarenalectomy.—The Coris failed to find any marked difference in the carbohydrate metabolism of normal and suprarenalectomized animals. Emphasis is laid on the fact that the inhibition of glycogen synthesis in the liver of insulinized animals is not due to the action of epinephrine. Insulin injections have also been shown to cause a diminution of liver glycogen in animals in the postabsorptive state. A repetition of these experiments on suprarenalectomized mice gave the same result. This phenomenon is, therefore, not connected with an increased discharge of epinephrine.

Bacteriologic Studies of Acute Rheumatic Fever.—From the blood, tonsillar crypts, abscesses, heart vegetations, feces and urine from persons with rheumatic fever and the allied forms of this protean disease, Birkhaug has isolated a new type of nonmethemoglobin-forming streptococcus which constitutes a closely related group of micro-organisms, distinguishable from the *Streptococcus viridans* and *Streptococcus hemolyticus* groups. Among sixty-eight strains of the nonmethemoglobin-forming streptococcus isolated from rheumatic fever, forty-nine strains, or 72 per cent, were found to produce a demonstrable soluble toxic filtrate, slightly weaker in toxicity than that obtainable from *Streptococcus erysipelatis*. About 15 per cent of persons without a history of rheumatic fever, and from 56 to 76 per cent of persons with a history of rheumatic fever gave positive skin reactions within twenty-four hours after the injection of this filtrate. Intravenous and subcutaneous injections in the rabbit of the living nonmethemoglobin-forming streptococcus invariably produced a nonsuppurative polyarthritis, with marked swelling of the joints. Subacute bacterial endocarditis and myocarditis, with a unique and regular tendency to vegetative mitral stenosis, extensive mural vegetations, and occasionally pseudonodular arrangements of multinucleated forms of leukocytes, as well as of polymorphonuclear and mononuclear cells, were encountered. Intravenous and subcutaneous injections of the sterile toxic filtrate rapidly developed polyarthritis of the nonsuppurative form, after repeated injections of increasing doses. The only changes found in the heart of the rabbits injected with the sterile toxic filtrate were those of myocardial degeneration.

Destruction of Botulinum Toxin by Bacteria.—Sherman et al. present data which indicate the destruction of botulinum toxin by *B. coli*, *B. communior*, *B. aerogenes* and *Proteus vulgaris*.

Insulin Keeps Depancreatized Dogs Alive.—A number of dogs totally deprived of the pancreas and fed on meat have been kept alive by Murlin for periods of from six weeks to four months on daily doses of from 40 to 100 clinical units of insulin in blood serum administered carefully by stomach tube in such a way as to preclude the possibility of absorption from the mouth. The effect on respiratory metabolism is immediate.

Lymphocytes and Macrophages.—The possibility of the transformation of a small lymphocyte into a macrophage (polyblast) and further into a fibroblast is demonstrated by Maximow.

Magnesium Sulphate Lowers Mortality of Thyroparathyroidectomized Rats.—The high death rate among thyroparathyroidectomized rats is reduced by Jung and Cook by the intraperitoneal injection of magnesium sulphate. For a rat weighing 150 Gm., the injection consists of 5 cc. of a 1 per cent solution of the crystalline salt. Experience has shown that asepsis is unnecessary. A normal rat can easily tolerate as many as five hourly injections of this quantity. After each injection, manifestations of the well known anesthetic and curare-like actions of magnesium are noted.

Effect of Venostasis on Heart Failure.—Danzer checks the circulatory overflow in the periphery by the compression of the veins in the four extremities. This is conveniently performed by applying four blood pressure cuffs around the extremities as near to the trunk as possible. These cuffs are all in series and connect with an ordinary blood pressure manometer and rubber bulb. The apparatus is termed the "venostat." The cuffs are gradually inflated up to diastolic pressure, and maintained at this level for from ten to twelve minutes. They are then very gradually deflated. The application of this procedure during a cardio-asthmatic attack relieves the symptoms in about five minutes, and frequently terminates the attack by the time the treatment has been completed. Objectively, sonorous and sibilant râles that may be present over the lungs become very faint or disappear entirely. In the belief that venostasis unloads the heart sufficiently for recuperation, its effect was tried on clinical cases of heart failure in which large doses of digitalis were required. Only far advanced cases were studied. Digitalis was not given, and no other treatment besides the restriction of salt and fluid intake was applied. Venostasis was produced for from ten to twelve minutes every two hours. Marked improvement in the dyspnea resulted. Orthopnea disappeared. The edema lessened and the water excretion increased—in some cases, it exceeded the fluid intake. After a week, however, digitalis had to be given again because of the return of the edema. Danzer believes that venostasis is capable of disembarrassing an insufficient heart, and that only in the far advanced cases must digitalis, in addition, be given.

Filtration Experiments with Bacteriophage.—Experiments done by McKinley and Holden indicate that a particular substance such as the bacteriophage is filtrable from the cerebrospinal fluid to the blood stream in rabbits, but not from the blood stream to the cerebrospinal fluid.

Liver Injury in Acute Alcohol Poisoning.—The indirect van den Bergh quantitative test for bilirubin, and the quantitative determination of urobiligen in the urine, were applied by Wallace in seventeen cases of acute alcoholic poisoning. There was found an increase in the amount of bilirubin in the blood serum, which persisted for four or five days, with a gradual decline to the normal. Estimations were made. An increase in urobiligen was found ranging in dilutions from 1:90 to 1:350. The urobiligen curve closely corresponded to the bilirubin curve. This increase of both bilirubin and urobiligen was directly proportionate to the severity of the poisoning. It is concluded from these observations that in acute alcoholic poisoning there is definite evidence of liver injury, and that this is proportionate to the severity of the poisoning.

Pharmacology of Ergothioneine.—The negative results obtained by Tainter support the earlier conclusion that this substance does not have well marked pharmacologic actions.

Southern Medical Journal, Birmingham, Ala.

20: 257-334 (April) 1927

*Pollen Proteins: Clinical Significance in Hay-Fever. H. S. Bernton, D. B. Jones and F. A. Csonka, Washington, D. C.—p. 257.
Curve of Phenolsulphonphthalein Excretion. A. J. Crowell, Charlotte, N. C.—p. 264.
*Vegetal Bronchitis: Fifteen Cases. P. Stiles, Birmingham.—p. 269.
Ependymal Neoplasm of Median Nerve. J. A. Lanford and I. Cohn, New Orleans.—p. 273.
Joint Tuberculosis. R. A. Hibbs, New York.—p. 278.
Surgery of Goiter. W. D. Haggard, Nashville, Tenn.—p. 281.
Eye Contraindications in Arsenic Treatment of Syphilis. O. H. King, Hot Springs, Ark.—p. 284.
*Syphilis of Urinary Bladder. B. W. Turner, Houston, Texas.—p. 289.
Supracondylar Fractures of Humerus. A. L. Gray, Richmond, Va.—p. 292.
Typhoid Osteitis: Two Cases. C. C. Garr, Lexington, Ky.—p. 296.
*Pulmonary Teratoma. W. H. Slaughter and S. H. Stephens, Mobile, Ala.—p. 301.
Medical Diagnosis. A. Stengel, Philadelphia.—p. 306.
Significance of Blood Pressure in Circulatory Disorders of Extremities. B. M. Bernheim, Baltimore.—p. 311.
Early Diagnosis of Tuberculosis in Children as Means of Controlling Disease. H. Casparis, Nashville, Tenn.—p. 314.
Indications for Cesarean Section. J. R. Bloss, Huntington, W. Va.—p. 317.
Postoperative Cystitis. E. G. Ballenger and O. F. Elder, Atlanta, Ga.—p. 321.
Immediate Self-Disinfection After Sex Exposure as Public Health Activity. J. Hancock, Louisville, Ky.—p. 322.

Pollen Proteins.—Bernton et al. found that the toxic action of pollen on susceptible individuals is not restricted to the albumin. Cutaneous testing has demonstrated a sensitivity of patients to one or more proteins isolated from pollen.

Vegetal Bronchitis.—Stiles points out that the systematic enlightenment of parents and nurses, as well as misguided friends and strangers, to the danger of giving peanuts, watermelon and similar substances to young children would materially reduce the number of these cases. If left untreated, these cases are almost invariably quickly fatal, but if subjected to early bronchoscopy, the prognosis is distinctly favorable.

Syphilis of Urinary Bladder.—The six cases observed by Turner have all been tertiary manifestations of the disease: four ulcers and two papillomatous masses with disintegrating processes going on in one. In all cases there was a positive Wassermann reaction; yet all but one patient gave a negative history of syphilis. The symptoms in each case were alike with respect to cystitis, frequency, pain and slow onset.

Primary Pulmonary Teratoma.—This case is reported by Slaughter and Stephens as one of primary pulmonary teratoma of a malignant character, which most likely originated from the pleura in the interlobar space between the upper and lower lobes of the left lung, and invaded both the mediastinum and the left lung.

U. S. Naval Medical Bulletin, Washington, D. C.

25: 229-504 (April) 1927

Medicine in Turkey. C. W. O. Bunker.—p. 229.
Color Blindness. E. H. H. Old.—p. 253.
Etiologic Factors in Production of Maxillary Antrum Disease. G. B. Trible.—p. 266.
Bureau of Medicine and Surgery's Exhibit, Sesquicentennial, Philadelphia, 1926. R. C. Holcomb.—p. 272.
Malaria in Haiti. C. S. Butler and E. Peterson.—p. 278.
Institutional Policies as Applied to Year's Dental Activities. J. L. Brown.—p. 288.
Recurrence of Inguinal Hernia. K. E. Lowman.—p. 300.
Cerebrospinal Fever. P. Richmond.—p. 304.
Theories Concerning Mechanism of Insulin Effect on Carbohydrate Metabolism. H. Phillips.—p. 309.
*Wassermann Reaction Following Bismuth Treatment of Yaws and Syphilis. C. D. Middlestadt.—p. 315.
Tuberculous Veterans' Bureau Patient. J. D. Blackwood, Jr.—p. 319.
Ocular Enucleation: Cases. C. B. Camerer and B. P. Davis.—p. 325.
Treatment of Irreducible Dislocated Lower Jaw of Ninety-Eight Days' Duration: Case. M. D. Willcutts.—p. 331.
Traumatic Rupture of Spleen and Splenectomy: Case. L. W. Johnson.—p. 336.
*Diathermy in Shock. G. F. Cottle.—p. 340.

*Spontaneous Rupture of Heart: Case. G. W. Cooper.—p. 343.
*Mercurochrome, Foreign Protein and Sugar Treatment of Acute Gonorrheal Urethritis. L. H. Williams and G. F. Cooper.—p. 352.
*Glandular Fever with Inguinal Adenopathy. C. C. Yanquell.—p. 358.
*Case of Acquired Hydrocephalus. E. C. White.—p. 361.
*Carcinoma of Stomach with Large Retroperitoneal Tumor. W. H. Whitmore.—p. 365.
*Methenamine in Meningeal Infections. A. E. Brunschwig.—p. 369.
*Reinfection in Syphilis. C. P. Archambeault.—p. 372.
*Bullet Wound of Jaw. P. H. Goldberg.—p. 374.
Pensacola Hurricane. M. J. McCloud.—p. 379.
Hurricane Thrill. E. E. Wells and M. Hennemeier.—p. 383.
Epidemic of Impetigo Contagiosa. C. W. Spofford.—p. 385.

Treatment of Yaws and Syphilis in Haiti.—The treatment given at the Haitian General Hospital for syphilis and yaws consists of 1 grain (0.065 Gm.) of mercury salicylate in a suspension of liquid petrolatum given intramuscularly each Tuesday, and 1 grain (0.065 Gm.) of sodium potassium bismuth tartrate in 2 cc. of freshly distilled water given intramuscularly each Thursday. The sodium potassium bismuth tartrate contains 67 per cent of bismuth. Middlestadt reports the following results: in 60 per cent of the cases, a negative Wassermann reaction; in 16 per cent, a reduction to 1 plus; in 8 per cent to 2 plus, and in 2 per cent to 3 plus; in 14 per cent the reaction remained unchanged. There were four cases of abscess formation. It was found that these conditions were relieved by giving the same amount of the salt in 2 cc. of distilled water instead of 1 cc.

Diathermy in Shock.—Cottle's patient recovered from a most extreme degree of shock resulting from an automobile accident in which he sustained a compound fracture of the leg bones. It is believed that diathermy to the liver region contributed largely to this recovery.

Spontaneous Rupture of Heart.—Cooper reports two cases. In the first case the cause of death was obscure. A necropsy was performed, and the anatomic diagnosis was nontraumatic, spontaneous rupture of the left ventricle of the heart. The contributory cause was chronic myocarditis, with marked fibroid and fatty degeneration. In the second case, the chief complaint was soreness in the chest and cough. The diagnostic impression at the admission examination was chronic myocarditis with passive congestion of the liver, angina pectoris, and arteriosclerosis. The roentgen-ray report showed fusiform dilatation of the aortic arch. The patient died on the morning of the fifth day. At the necropsy, healed tuberculosis of the lungs, chronic diffuse nephritis, arteriosclerosis, coronary sclerosis and occlusion, and spontaneous rupture of the left auricle of the heart (multiple) were found.

Mercurochrome Treatment of Acute Gonorrhea.—The method of treatment with mercurochrome devised by Potter and Redewill was tried by Williams and Cooper in twenty-five cases. Following the injections there was a uniform change in the leukocytes, consisting of a negative phase in which all types of cells, except the eosinophils and lymphocytes, decreased, followed by a positive phase in which these cells decreased and the other cells and the total white count increased. An artificial immunity to infection is apparently established by the injection of these substances, as was evidenced by a rise in temperature, a negative phase followed by positive phase, and an appreciable leukocytosis lasting for some days. Practically the same results were obtained with mercurochrome and milk, without the addition of sugars, but it is recommended that the latter be employed as a protective agency against possible anaphylactic shock.

Glandular Fever.—A clinical case of glandular fever is reported by Yanquell, which is quite unusual in that the inguinal glands were the only ones of the superficial groups involved.

Acquired Hydrocephalus.—In the case reported by White, there was no history of any primary condition, and the complete history of the case comprised only the symptoms of a gradually increasing intracranial pressure. It was only at the necropsy that evidence of a tuberculous meningitis was discovered.

Carcinoma of Stomach and Retroperitoneal Space.—Carcinoma developed in a young man, aged 27; the origin was apparently in the stomach, and the tumor extended through the stomach wall and formed a huge mass in the retroperitoneal space, continuous with the tumor area of the stomach. There were multiple metastases to the liver, gastrohepatic omentum, retroperitoneal glands, and the mesentery. In spite of the huge size of the tumor there were no growth symptoms, and the tumor was not noticed until one month before death; anemia was not present. It was impossible to determine the length of time this tumor had existed, but it certainly was not of recent origin, as there were large necrotic areas with considerable fibrosis.

Methenamine in Meningeal Infections.—It is shown by Brunschwig that methenamine, when administered by mouth in sufficient doses, readily passes into the cerebrospinal fluid. But here free formaldehyde is not liberated, nor does the drug exert antiseptic powers.

Reinfection in Syphilis.—In Archambeault's case the first infection was probably extragenital. Both infections were believed to have been innocently acquired. There were two primary lesions in the second infection.

Curious Case of Bullet Wound of Jaw.—Goldberg's patient was hit in the upper jaw by a bullet. He lost consciousness for two or three minutes. He expectorated a little blood for about thirty minutes. Both central incisors and the right upper canine were broken off at the gum border. The tongue was slightly lacerated in the median line for a distance of one-half inch. The bullet passed through the posterior pharyngeal wall just to the left of median line, and had its exit 1 inch to the left of the sixth cervical vertebra. Except for the loss of three teeth, this patient has no defects in speech, mastication or sensation.

U. S. Veterans' Bureau Med. Bull., Washington, D. C.

3: 293-408 (April) 1927

Late Results of Fractures of Long Bones. J. B. Walker.—p. 293.
Origin and Work of United States Veterans' Bureau. R. C. Spier.—p. 315.
*Early Symptoms of Brain Tumor. C. L. Carlisle.—p. 321.
*Etiology of Neurasthenia. H. C. Sharp and J. W. Visher.—p. 329.
Plea for Medical Surveys in Veterans' Bureau Tuberculosis Hospitals. W. D. McFaul.—p. 335.
Importance of Teamwork in Bureau Hospitals. B. B. Edwards.—p. 339.
Heliotherapy in Surgical Tuberculosis. G. O. Bassett.—p. 342.
Passes and Leaves: Medical Problem. S. H. James.—p. 347.
Recent Tests for Liver Functions: Clinical Significance. D. L. Liberman.—p. 350.
Amnesia. C. B. Covey.—p. 356.
Prehistoric and Primitive Dentistry. R. L. Denson.—p. 363.
Congenital Cerebral Arteriovenous Aneurysm. H. W. Baxley.—p. 367.
Neurotrophic Skin Disturbance Occurring in Severe Bronchial Asthma. L. M. Cochran.—p. 371.

Early Symptoms of Brain Tumor.—The four cases of brain tumor reported by Carlisle tend to indicate that the patient's first symptoms for which he is hospitalized may strongly suggest a psychoneurosis of a neurasthenic type; namely, "stomach trouble"; a generalized complaint that "health is failing"; vague disturbances of vision usually dismissed as refractive errors, and complaints of rather mild headaches and a feeling of inability to go on working as usual. Any patient with psychoneurosis of the neurasthenic type, with symptoms relating to the eye and stomach, and with head sensations, including visual hallucinations (especially when on a nontoxic basis), should receive sufficient observation and later reexaminations to exclude or include the triad—choked disk, the vomiting due to an organic brain lesion, and headaches from organic brain lesions (with or without an actual psychosis). Among the earliest symptoms which may make a definite impression on an examiner is that of a visual hallucinosis.

Etiology of Neurasthenia.—Sharp and Visher assert that the so-called functional disorders of irritable heart, pseudoangina pectoris and paroxysmal tachycardia; irritable colon, constipation, and flatulence; hypotension, hypertension, and angioneurotic edema; menstrual difficulties and disorders of the sexual function, are especially likely to be accompanied by neurasthenic symptoms. Ill defined endocrinopathies, blood dyscrasias, diseases of the genito-urinary tract, quiescent tuberculosis, early diabetes, and focal infections are also frequent etiologic factors.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

British Journal of Actinotherapy, London

1: 1-40 (Dec.) 1926

Basic Principles of Curative Action of Electrical Energy. W. J. Turrell.—p. 16.
"Antagonistic Action of Radiations and Its Importance in Practical Actinology." L. G. Dufestel.—p. 17.
Artificial Light Therapy: II. Where and How to Install Ultraviolet Lamp. W. K. Russel.—p. 19.

1: 1-44 (Jan.) 1927

Evolution of Man's Knowledge of Light: I. From Empedoceles to Newton. R. C. Macfie.—p. 14.
Artificial Light Therapy: III. Administration of Ultraviolet Radiation. W. K. Russell.—p. 16.
Ultraviolet Radiation in Dental Surgery. N. Miller.—p. 17.
Radiologic Blood Changes. B. Leggett.—p. 19.
Heliotherapy and Pleuropulmonary Tuberculosis. Legourd.—p. 21.

1: 1-44 (Feb.) 1927

Active Rays of Sunlight. L. Hill.—p. 18.
Ultraviolet Radiation in Combination with Hormones. K. Huldschinsky. —p. 19.
Evolution of Man's Knowledge of Light: II. Discovery of Wave-Motion. R. C. Macfie.—p. 21.
Artificial Light Therapy: IV. Biologic Action of Ultraviolet Radiation. W. K. Russell.—p. 22.
Radiologic Blood Changes. B. Leggett.—p. 24.

Indian Journal of Medical Research, Calcutta

14: 523-784 (Jan.) 1927

Revision of Culicine Mosquitoes of India: XIX. Indian Species of Aëdomyia and Orthopodomyia: Two New Species. P. J. Barraud.—p. 523.
Id.: XX. Indian Species of Armigeres (Including Leicesteria): Two New Species. P. J. Barraud.—p. 533.
Id.: XXI. New Species of Aedimorphus and Finlaya: Stegomyia Albolineata (Theo.). P. J. Barraud.—p. 549.
Id.: XXII. Indian Species of Genus Taeniorhynchus (Including Mansonioides): One New Species. P. J. Barraud.—p. 555.
Cytoplasmic Counter-Staining: Protozoologic Technic. H. E. Shortt.—p. 565.
"Resistant Nonflagellate Torpedo and O Bodies" of Row in Old Cultures of Leishmania Donovani: Relationship to Infections. H. E. Shortt, A. C. Craighead, K. Chand and C. S. Swaminath.—p. 567.
Infectivity of Forms of Leishmania Donovani Found in Phlebotomus Argentipes. H. E. Shortt, P. J. Barraud and A. C. Craighead.—p. 577.
Mode of Formation and Morphology of O Bodies of Row in Old Cultures of Leishmania Donovani. H. E. Shortt and C. S. Swaminath.—p. 581.
*Transmission Experiments in Indian Kala-Azar with Phlebotomus Argentipes. H. E. Shortt, P. J. Barraud and A. C. Craighead.—p. 589.
*Effect of Quinine on Phosphorus Metabolism in Man. T. A. Hughes and D. L. Shrivastava.—p. 601.
Method of Construction and Reduction of Correlation Tables. A. J. H. Russell and E. R. Sundararajan.—p. 619.
*Nutritive Value of Wheat, Paddy and Certain Other Food Grains. R. McCarrison.—p. 631.
*Effect of Manganese on Growth. R. McCarrison.—p. 641.
*Good Diet and Bad One. R. McCarrison.—p. 649.
Goiter at Lawrence Royal Military School, Sanawar, Punjab, India. R. McCarrison.—p. 655.
Vegetable Ghee (Vanaspati): Its Food Value. D. R. Thomas.—p. 659.
*Influence of Syphilis on Leprosy. R. B. Lloyd, E. Muir and G. C. Mitra.—p. 667.
Sandflies in Bombay City. T. C. McCombie Young.—p. 679.
Early Spontaneous Cure of Bilharziosis (S. Spindalis) in Monkeys (Macacus Sinicus): Bearing on Species Immunity. N. H. Fairley.—p. 685.
Experimental Transmission of S. Spindalis to Indian Water Buffalo. N. H. Fairley and F. Jasudasin.—p. 701.
Bacterial Efficiency of Mechanical Gravity Filters. V. Govinda Raju. —p. 707.
Development of Leishmania Donovani in Gut of Sandfly Phlebotomus Papatasii. L. E. Napier and R. O. A. Smith.—p. 713.
Filariasis in Some Areas in British India: Preliminary Investigation. V. T. Korke.—p. 717.
Prevalence and Epidemiology of Hookworm and Other Helminthic Infections in India: VI. Burma. A. C. Chandler.—p. 733.
Id.: VII. Bihar and Orissa. A. C. Chandler.—p. 745.
Id.: VIII. United Provinces of Agra and Oudh. A. C. Chandler.—p. 761.
Fertilization and Development of Ovum in Anopheles in Captivity. B. S. Chalam.—p. 775.
Test for Differentiation of Malaria from Kala-Azar, Typhoid and Other Fevers. E. C. Hodgson, A. C. Vardon and Zorawar Singh.—p. 779.

Experimental Kala-Azar.—Sixty experimental animals, subjected to 184 bites from a minimum of 152 *Phlebotomus argentipes* known to be infected with *Leishmania donovani*, have not, in any case, developed kala-azar. The presumption of Shortt et al. is not that *Phlebotomus argentipes* cannot transmit the disease by its bite, but that the experimental animals used were not sufficiently susceptible to *L. donovani* to become infected, except as the result of a more intensive exposure to infection than that to which they were subjected in the experiments.

Effect of Quinine on Phosphorus Metabolism.—The results obtained by Hughes and Shrivastava show that quinine in antimalarial doses in man causes a retention of phosphates. This fact is evidence of the interference of this drug with the carbohydrate metabolism. This interference takes the form of causing an increased output of insulin. Therefore, when quinine is administered in large doses over long periods, as is often done in the treatment of malaria, it is acting more or less continually as a stimulant of the pancreatic islets, and as overstimulation of this tissue is known to produce exhaustion, it is not unlikely that in many cases quinine plays a rôle in the production of a diabetic condition.

Nutritive Value of Wheat.—McCarrison's experiment demonstrates the high order of the nutritive value of whole wheat and the comparatively low order of the nutritive value of whole rice, a value which depends not only on the quality of their proteins but on their content of vitamins and of certain mineral salts, of which one is manganese. A diet of whole wheat, sprouted grain, milk, milk products and green leafy vegetables, with meat occasionally, is one on which Indians flourish best and attain to the highest degree of physical efficiency encountered in that country.

Effect of Manganese on Growth.—McCarrison concludes that the growth-promoting properties of whole wheat are in part due to the content of manganese in this cereal. However, a concentration of one part of manganese to 12,600 parts of food exercises a progressively increasing and retarding influence on growth; whereas a concentration of one part of manganese in 617,700 parts of food exercises a markedly favorable influence on growth.

Good Diet and Bad One.—McCarrison says that a diet composed of whole wheat, milk, milk products, sprouted legumes, uncooked vegetables and fruit, with fresh meat occasionally, far surpasses in nutritive value that composed of white bread, tea, sugar, margarine, jam, boiled vegetables and tinned meat, to which the common food preservatives—boric acid, formaldehyde vapor and sulphurous acid—are added. The former promotes physical efficiency and health, but the latter gives rise to stunting of growth, to physical inefficiency, and oftentimes to disease. The maladies of which the bad diet is so apt to lay the foundation are lung and gastro-intestinal disease.

Influence of Syphilis on Leprosy.—Lloyd et al. assert that any nonspecific reactions in the latter stages of leprosy are due to experimental factors, and are not caused by reagins comparable to those responsible for complement fixation in syphilis. They will not, therefore, serve as a basis for any specific serum test for leprosy.

Indian Medical Gazette, Calcutta

62: 61-120 (Feb.) 1927

*Epidemiology and Endemiology of Cholera. J. W. Tomb and G. C. Maitra.—p. 61.
Radium and Cure of Cancer. J. A. Shorten.—p. 64.
Eruption of Teeth. P. S. Khosla.—p. 68.
Result of Artificial Pneumothorax Treatment in Pulmonary Tuberculosis: One Hundred and Eighty-Two Cases. R. B. M. K. Pai.—p. 69.
Apparently Infectious Outbreak of Epidemic Dropsy Form of Beriberi. I. R. Anderson.—p. 71.
Two Forms of Infection of Kidney. J. R. Roberts.—p. 75.
Control of Kala-Azar on Tea Estates. L. E. Napier and P. Foster.—p. 76.
Cerebral Abscess: Tuberculous Peritonitis. M. Umar.—p. 80.
Arsenical Dermatitis Following Injections of Novarsenobillon. B. P. Bannerji.—p. 81.
Cystic Tumor of Mesentery. J. B. Vaidya.—p. 81.
Fracture of Skull and Injury to Brain, Ending in Complete Recovery. S. R. Ingle.—p. 82.
Case of Ascites Cured by Permanent Drainage of Fluid into Subcutaneous Tissue. D. N. Kalyanvala.—p. 83.
Case of Angioneurotic Edema. E. Burke.—p. 83.

*Staining of Tubercle Bacilli. C. P. V. Shunker.—p. 84.
*Berberine Sulphate in Oriental Sore. R. L. Varma.—p. 84.
Septicemia Treated by Intravenous Injection of Iodine. B. L. Chopra.—p. 85.
Accidental Abdominal Injury. T. P. Varma.—p. 85.
Bilateral Dislocation of Mandible. S. C. Das.—p. 86.
Surgical Emphysema Following Fracture of Fifth and Sixth Ribs. N. Chatterjee.—p. 86.
*Ascaris Infection Simulating Cholera. Y. S. Row.—p. 87.
Three Cases of Malignant Disease. J. B. Vaidya.—p. 87.
Case of Imperforate Hymen. P. B. Rau.—p. 88.
*Large Ovarian Cyst. M. K. Pillai.—p. 88.
Case of Parovarian Cyst. C. Nath.—p. 89.
Case Typical of Rural Midwifery Practice. C. G. Dhandhukia.—p. 89.
Two Cases of Malaria. S. K. Biswas.—p. 90.

Epidemiology of Cholera.—By means of the "open-bowel" method of culture which was devised by them, Tomb and Maitra have been able to prove that in many localities of an endemic area as many as 35 per cent of the inhabitants are chronic carriers of nonagglutinating vibrios. Efforts to demonstrate the identity of agglutinating and nonagglutinating vibrios found in cases of clinical cholera, while proving that the two vibrios are closely allied serologically, were, however, inconclusive and inconstant in results. Extended examinations of the stools of convalescent patients with epidemic cholera showed that 80 per cent of these persons became chronic carriers of nonagglutinating vibrios, the agglutinating form permanently disappearing in from two to four weeks. After examination of thousands of stools, the authors have been unable to discover one permanent carrier of agglutinating vibrios, and no such carrier has ever been reported by any other observers elsewhere. They therefore conclude that the nonagglutinating vibrio (which is itself capable of causing clinical cholera) takes on the agglutinating characteristic under certain biochemicophysical conditions in the human intestine, the nature of which is at present unknown, and that this mutation or epidemic form is the cause of epidemic cholera. Nonagglutinating intestinal vibrios constitute the reservoir of cholera both epidemic and endemic, the degree of nonagglutinability in a vibrio apparently depending not only on the nature of its surroundings but also on the period of time which has elapsed since it last existed in agglutinating or epidemic form. The nearer to the threshold of agglutinability a nonagglutinating vibrio is, the more closely would it seem to be allied both serologically and epidemiologically to the agglutinating vibrio.

Staining Tubercle Bacilli.—Shunker endorses the use of a half saturated watery solution of picric acid as a counterstain instead of methylene blue. The advantage of the method lies in the fact that the red stained tubercle bacillus shows up much better against a yellow background than a blue one, and it appears to have the additional property of restoring the color to feebly acid-fast bacilli, which would otherwise be invisible or unrecognizable.

Berberine Sulphate in Oriental Sore.—Varma injects 0.25 Gm. of berberine sulphate in 1 cc. of distilled water into the sores. This is followed by some local reaction in the form of congestion and edema, but with very little pain and tenderness, all of which subsided within four days. A week later the infiltration is repeated. A third injection is not required.

Treatment of Ascaris Infestation.—Row gave his patient 5 grains (0.32 Gm.) of santonin. The boy passed round worms both orally and by rectum for a week, the total number passed being 164. A second dose of santonin was given on the fourth day in order finally to eradicate the infection, and the patient made an uneventful recovery.

Large Ovarian Cyst.—The tumor in Pillai's case weighed 20 pounds (9 Kg.). It was a large multilocular cyst of the left ovary.

Irish Journal of Medical Science, Dublin

6: 145-192 (April) 1927

*Human Oocyte Showing First Polar Body and Metaphase Stage in Formation of Second Polar Body. A. F. Dixon.—p. 149.
*Polar Bodies. J. B. Gatenby.—p. 152.
*Epistaxis as Symptom of Toxemia of Pregnancy. B. Solomons and T. G. Wilson.—p. 154.
*Rupture of Uterus Treated by Plugging Rent: Recovery. B. Solomons.—p. 157.
*Case of Salpinovesical Fistula. A. H. Davidson.—p. 159.
Antepartum Hemorrhage. L. Cassidy.—p. 161.

Structure of Ripe Human Ovum.—Dixon reports the examination of a ripe human ovarian follicle containing an oocyte in which the first polar body was present, and in which the chromosomes of the remaining nucleus were in the metaphase of the mitosis which would have given rise to the second polar body. The specimen was removed during the course of an operation from the body of a young adult woman.

Polar Bodies and Sex Determination.—Through a study of the spermatogenesis of man, and a comparison of this with the sperm formation and oogenesis of lower mammals and invertebrates in general, Gatenby has shown that in human beings sex determination is caused by the spermatozoa, which are of two types. The eggs are all the same so far as sex is concerned, and during polar body formation the two large sex chromosomes are separated, one going to the egg, one to the polar body. In this case, also, one gets the accidental segregation of the maternal father's or mother's sex chromosome in the egg. Thus, at polar body formation, it is determined whether the new child will have those qualities which are sex linked which come from the maternal grandfather or the grandmother.

Epistaxis Symptom of Toxemia of Pregnancy.—The epistaxis in this case was severe and could not be checked; hence, Solomons and Wilson decided to do an abdominal hysterotomy under stovaine anesthesia in the twenty-ninth week of pregnancy. A living fetus was extracted, but it died on the following day. The mother recovered.

Plugging Ruptured Uterus.—Solomons suggests that the treatment of ruptured uterus by plugging the rent with gauze, according to Tweedy's method, be applied more often instead of laparotomy:

Salpingovesical Fistula.—In Davidson's case tuberculous disease of the uterine adnexa caused adhesion to the bladder, with the establishment of a fistulous communication later. Davidson found only three similar cases on record.

Lancet, London

1: 583-636 (March 19) 1927

*Problems in Treatment of Neurosyphilis. J. L. Birley.—p. 583.
*Cardiac Dyspnea: II. F. R. Fraser.—p. 589.
*Chlorides of Gastric Contents: Relation to Free Acidity. S. Miller and F. B. Smith.—p. 593.
*Postpartum Avulsion of Uterus: Recovery. R. H. Boggon.—p. 595.
Value of Present Methods of Treating Leprosy. H. W. Wade and C. B. Lara.—p. 597.
Severe Chorea Associated with Tapeworm. J. Burnet.—p. 600.
*Case of Petechial Hemorrhages on Lungs and Heart of Unborn Child. S. Smith.—p. 601.
Two Cases of Streptococcal Empyema Treated by Continuous Aspiration. H. F. Turney.—p. 601.

Treatment of Neurosyphilis.—Birley expresses the belief that arsphenamine and its allied compounds, in the treatment of syphilis, other than in the Wassermann negative primary stage, has not succeeded in protecting the human nervous system from syphilis; on the other hand, there is no evidence that it has increased the incidence of neurosyphilis. The influence of arsenical compounds in modifying the incidence, time of onset and character of neurosyphilis remains to be determined. The pathologic changes that occur in the nervous system, including its coverings, and in the cerebrospinal fluid, from the time of infection up to the development of late parenchymatous neurosyphilis, and the mutual relations which exist between these changes, are still largely a matter of conjecture. The value of antisyphilitic treatment in arresting the progress of tabes and allied conditions is difficult to estimate, owing to their liability to undergo spontaneous arrest. The Wassermann reaction is not biologically specific, and its value as a guide to and indication for treatment cannot, therefore, be regarded as absolute. The nonspecific treatment of general paralysis has, according to the published figures, achieved better results than any previous method. A majority of the unsolved problems of syphilis are

intimately bound up with the increasing immunity to syphilis of the civilized peoples, together with the lack of any method by which this immunity can be estimated.

Cardiac Dyspnea.—The study of arterial blood in nineteen cases of cardiac dyspnea leads Fraser to the conclusion that (*a*) in cases of extreme congestive failure and of pulmonary disease in addition to heart failure, faulty elimination of carbon dioxide and faulty absorption of oxygen in the lungs may be factors in the production of increased respiratory activity; and (*b*) in patients near death, retention of fixed acids and raised hydrogen ion concentration may be factors in the production of increased respiratory activity, but that (*c*) in cases of cardiac dyspnea other than these, the condition of the arterial blood cannot account for the dyspnea, and is, indeed, indicative of the presence of increased pulmonary ventilation to which the changes in the arterial blood are secondary. Since the changes in the arterial blood due to the conditions (*a*) and (*b*) would mask the effect of such increased ventilation, it is reasonable to suppose that there is a cause of increased respiratory activity present in all cases of heart failure, which is independent of the quality of the blood supplied to the respiratory center.

Chlorides of Gastric Contents.—According to Miller and Smith, the mean curves of total chlorides in all grades of gastric acidity are similar in shape, differing only in magnitude. The mean curves of the inorganic chlorides have the same general form and relation to time of digestion as those of the total chlorides, but agree much more closely in magnitude. In hyperchlorhydria, the inorganic chlorides tend to remain low or to rise only very slightly. On the basis of the figures of the chlorides, there does not seem to be a clear definition of the so-called achylia of Addison's anemia, as distinct from other cases of achlorhydria.

Postpartum Avulsion of Uterus.—The case reported by Boggon is of interest, as it reveals how completely a woman may recover from the effects of so serious a disaster as the tearing out of the whole uterus after delivery. Four previous confinements had been normal. In the last confinement, the placenta was removed manually. In addition, there had been two miscarriages. The medical man had apparently been called in when labor was well advanced. He found a breech presentation. The membrane ruptured early, and a full-time living child, stated to be 12 pounds (5.4 Kg.) in weight, was born after a normal labor of eighteen hours. There was some delay in the birth of the placenta, and when it did come "the uterus, placenta, and a tumor were so inextricably mixed up and the neck of the uterus was so friable" that the attending physician "removed them all" by cutting through such attachments as remained. On the third day after delivery, the physician requested the admission of the patient. She did not complain of great pain, but had a certain amount of abdominal discomfort together with severe thirst. The abdomen was slightly distended in the lower part and tender; the uterus was not palpable. There was a bloodstained discharge, not much more in amount than the normal lochia, and not offensive. As there was no hemorrhage, and it was three days since delivery, the patient was merely given a sedative and propped up in bed. On the following day, she complained of abdominal pain. A constant flow of bright blood from the vagina, accompanied by a rise in the pulse rate, indicated the need for further investigation. At the top of the vagina was a ragged hole with coils of intestine lying above. On the right of the tear was a piece of decomposing muscular tissue, about 1 inch square, apparently all that remained of the uterus. The hole in the vault and the vagina were lightly plugged with gauze wrung out of 1:1,000 solution of formaldehyde and the patient was put back to bed. There was no further bleeding and the plug was removed four days later. The patient made an uneventful recovery.

Petechial Hemorrhages on Lungs and Heart of Unborn Child.—Smith reports the case of a young woman, from eight to eight and a half months pregnant, who received a blow on the head from a heavy stick and died shortly after. The following day, the fetus was removed from the uterus. On examination of the thoracic organs of the child, numerous petechial hemorrhages were observed on the anterior surface of the heart and aorta, and over the right and left lung. They were scattered over the whole surface of the lung, but were more intense on the surfaces in contact with the heart and on the interlobar surfaces. The hemorrhages varied in size from small pin-pricks to spots the size of a pin's head. The surface of the left lung had a slightly mottled appearance in the upper lobe, as a whole, the lungs looked as though they had never respired. They sank when placed in water. On microscopic section, no trace of vesicles could be observed, but under the pleura and scattered throughout the whole of the lung tissue there were numerous hemorrhages. These were by no means petechial, but took up quite a large part of the section. Numbers of greatly dilated capillaries could be observed, and these were in many cases surrounded by blood. In certain places, hemorrhages could be traced from the lung tissue to the pleura. There was no sign of organization of the blood or other change in the tissues of the lung. The other organs of the child and the organs of the mother were healthy.

Archives de l'Institut Pasteur de Tunis

15: 289-384 (Dec.) 1926

*Filtrable Form of Bacillus Pestis. E. Burnet.—p. 292.
*Search for Bacterium Melitensis in Domestic Animals. H. Torstenson.—p. 305.
The Non-Acid-Resisting Phase of the Tuberculous Micro-Organism. J. Reenstierna.—p. 309.
New Experimental Researches on Hemolysis. H. Diacono.—p. 318.

The Filtrable Form of Bacillus Pestis.—Burnet experimented with filtrates of organs removed from rats and guinea-pigs dead from plague. Cultures of *Bacillus pestis* were obtained with three filtrates. One filtrate caused plague infection in the guinea-pig. The results proved that search for filtrable forms of bacteria should be made not in preserved cultures, but in infected animal tissues at the phase of suppuration or autolysis. The filtrable form of *Bacillus pestis* appeared as a granule proceeding from lytic disintegration of the bacillus. These filtrable forms present an analogy to that of the tubercle bacillus, probably also to those of the dysentery and of the typhoid bacilli.

Search for Bacterium Melitensis in Domestic Animals.—In his research, Torstenson used the blood and organs of twenty-three domestic animals living in contact with goats. Some of the latter were infected with *Bacterium melitensis*. The seroreaction and the cultures were negative. This shows that domestic animals, usually sensitive to melitensis inoculation, resist natural infection with the bacterium.

Archives Méd.-Chir. de l'App. Respiratoire, Paris

1: 395-490 (Oct.) 1926

*Embolic Form of Secondary Carcinomatosis of the Lungs. M. Loeper and R. Turpin.—p. 395.
Deep Roentgenotherapy in Tumor of the Mediastinum. J. Pierquin and G. Richard.—p. 412.
Roentgen-Ray Treatment of Laryngeal Lymphocytoma. P. Cottenot.—p. 434.

Embolic Form of Acute Secondary Carcinomatosis of the Lungs.—The case described was in a man, aged 45. The disease started with symptoms of gastric ulcer, developing gradually into those of cancer. Phenomena on the part of the lungs appeared six years later. The association of obliterating phlebitis with signs of recurring pulmonary infarction suggested, Loeper and Turpin say, the diagnosis of embolism of the lungs. The patient died after four days. At necropsy, miliary and nodular carcinomas were found in the lungs, without any traces of infarction. The coexisting congestion and edema were probably a factor in the pathogenesis of the pulmonary syndrome. Obviously the phlebitis was caused by the primary tumor.

Bulletin de l'Académie de Médecine, Paris

97: 389-440 (March 29) 1927

Statistics of Familial Cancer. Hanriot.—p. 389.
A Study of Diabetic Arteritis. M. Letulle et al.—p. 394.
Heredity of Cancer. Auvray.—p. 420.
Theinism in Tunis. B. Dinguizli.—p. 423.

*Action of Insulin on Nondiabetic Arteritis Obliterans. J. Yacoël and G. Boyer.—p. 429.
Microcrystallography in Identification of Mineral Waters. M. Perrin and P. Colson.—p. 434.

97: 441-466 (April 5) 1927

Case of Familial Cancer. Auvray.—p. 441.
A New Roentgenoqualimeter. Solomon.—p. 444.
Vaccine Treatment of Poradenitis. P. Delbet.—p. 453.
Elementary Structure of Striated Muscle Fiber. R. Lutembacher.—p. 457.
Inquiry on the Tuberculin Reaction in Rural Populations. Phélebon.—p. 462.

Beneficial Effect of Insulin in Arteritis Obliterans.—Yacoël and Boyer's case of nondiabetic arteritis obliterans was reported by Ambard, Boyer and Schmidt six months ago, when the patient, a man aged 36, had been under insulin treatment for six months. Rapid disappearance of the pain was then noted. Yacoël and Boyer now give further results of the treatment, which consisted in daily injections of 15 units of insulin. The patient is walking and has resumed his usual occupation. The oscillometric index rose from 3 to 5.5 within the last three months, evidencing increased permeability of the arteries. Yacoël and Boyer consider chronic arteritis obliterans as a local trophic disturbance in which other endocrine glands besides the pancreas may be involved. The influence of insulin is thus explained. Several similar cases are under treatment with insulin at the present time. Great improvement is manifest, although the treatment has been given for only a few months.

Bulletins de la Société Médicale des Hôpitaux, Paris

51: 337-382 (March 24) 1927

Pneumothorax Induced on the Side Opposite to Thoracoplasty. P. Ameuille.—p. 337.
Acrocyanosis Occasioned by Cold. E. May and G. Dreyfus-Sée.—p. 340.
Bilharzic Splenomegalia in Paris. P. Emile-Weil.—p. 344.
*Factors That Influence Learning to Walk. G. Variot.—p. 353.
Dysenteric and Azotemic Syndromes from Colon Bacillus. P. Melnotte and A. Farjot.—p. 361.
Pseudomalarial Jaundice Caused by Colon Bacillus. P. Melnotte and A. Farjot.—p. 364.
Suprarenal Paraganglioma with Paroxysmal Hypertension. C. Oberling and G. Jung.—p. 366.
Bronchiectasis Following Pleuropulmonary Sclerosis. E. Sergent et al.—p. 371.

Normal and Pathologic Factors Influencing the Age at Which Children Start to Walk.—Variot's statistics are based on 490 observations. About 67 per cent of the children began to walk when they were between 11 and 14 months old. Their height was then from 71 to 76 cm. The weight at birth was from 3,000 to 3,500 Gm.; when they started to walk it was from 9 to 9.6 Kg. A connection between the weight or height of the infants and the age at which they began to walk was not apparent. Of the children who were fed exclusively on mother's milk, 82.8 per cent began to walk between the eleventh and fourteenth months; in infants fed first on mother's milk and later artifically, the percentage was 68.58; the percentage in infants who were entirely bottle-fed was 61.45. Most of the children had six or eight teeth when they started to walk. The rôle of sex proved insignificant. Acute diseases, atrophic rickets, and syphilitic, tuberculous or alcoholic heredity retarded walking. The same was observed in regard to congenital or acquired diseases of the nervous system.

51: 383-430 (March 31) 1927

Embolic Obliteration of Common Iliac Artery Without Gangrene. A. Lemierre and A. Duruy.—p. 385.
Interlobar Pleurisy and Abscess of the Lung. J. Comby.—p. 393.
Avellis' Syndrome Spontaneously Cured. Lenoble and Pineau.—p. 395.
Pseudopneumothorax with Bronchiectasis in a Child. L. Ribadeau-Dumas et al.—p. 398.
Pulmonary Adenitis in Infants. L. Ribadeau-Dumas and Chabrun.—p. 402.
*Purpura with Lesions of the Spinal Ganglions. T. Mironesco and Perlstein.—p. 406.
*Spectroscopic Estimation of Bengal Rose in the Blood. Snapper and S. C. A. Spoor.—p. 409.
Roentgen Rays and Pilocarpine in the Treatment of Mikulicz's Syndrome. Pasteur Vallery-Radot et al.—p. 410.
Benzocinnamic Ester in Treatment of Pulmonary Tuberculosis. J. Jacobson.—p. 418.

Association of Purpura with Ganglionic Lesions.—In a case of fatal hemorrhagic purpura in a woman, aged 38, lesions of the lower spinal and the upper dorsal ganglions, of considerable extent, were discovered at necropsy by Mironesco and Perlstein. Chromatolysis of the nervous cells, increase of interstitial tissue and vascular hyperemia were found. Otherwise the neuraxon was intact. Symmetric location of the skin lesions suggested the theory that the pathologic changes in the ganglions might have been a factor in the disease.

Spectroscopic Evaluation of Bengal Rose in the Blood.—Snapper and Spoor point out the fact that colorimetric evaluation of bengal rose in the blood used in liver function tests may sometimes be misleading. This occurs in cases in which hemolysis is present. The pink hue of the bengal is then superposed on the red hue of the hemoglobin. To remedy this, the authors suggest a spectroscopic method of evaluation of the dye which, they say, is simple and rapid. Withdrawal of blood for control, which precedes injection of the bengal rose in the colorimetric method, is superfluous in the spectroscopic method. The details of the technic are given.

51: 431-490 (April 7) 1927

Pulmonary Abscess Cured with Autovaccine. R. J. Weisenbach.—p. 431.
Endocrine Theory of Buerger's Disease. Sicard.—p. 443.
*Edematous Form of Arteritis of the Lower Extremities. P. Harvier and A. Lemaire.—p. 446.
Lipiodol Examination of Arteritis of the Lower Extremities. P. Harvier and A. Lemaire.—p. 448.
Roentgen-Ray Treatment of Asthma and Spasmodic Coryza. Pasteur Vallery-Radot et al.—p. 456.
Pleonosteosis in Congenital Syphilis. G. Laroche and Barthes.—p. 459.
Bilateral Otitis in an Infant. L. Girard.—p. 465.
Note on Bilateral Otitis in an Infant. M. Renaud.—p. 467.
Bacillus-Free Sputum in Acute Tuberculosis. G. Paisseau and E. Boegner.—p. 469.
Interlobar Pleurisy and Suppuration of the Lung. E. Sergent and R. Kourilsky.—p. 476.
Chronic Endocarditis of Nonvalvular Origin. A. Landau et al.—p. 484.

Edematous Form of Arteritis in the Lower Limbs.—Harvier and Lemaire describe two cases of arteritis in the lower extremities, in which unilateral edema was the only clinical manfestation. The edema was accompanied by a high local temperature. In one instance, profuse sweating in both limbs preceded the edema by a year. Slight hypertension and increase in the oscillometric index coexisted with the edema. All the morbid signs testify to changes involving a part of the sympathetic. The changes may be connected with irritation of the arterial sheath, favored by walking and fatigue.

Paris Médical

61: 213-244 (March 5) 1927

Syphilis in 1927. G. Milian and L. Brodier.—p. 213.
Visceral Syphilis Awaked by Acute Infection. E. Gougerot.—p. 222.
Polymorphism and Evolution of Treponema. H. Jausion and A. Pecker.—p. 230.
Acquired Syphilis in Children. P. Fernet.—p. 233.
Recurring Roseola and Tardy Roseola. J. Delalande.—p. 236.
Pigmentary Syphilid of the Neck. M. Wahl.—p. 240.

61: 289-304 (March 26) 1927

War Surgery. Maisonnet.—p. 289.
*Inhibiting Action of Ergotamine on the Sympathetic. C. Dreyfus.—p. 301.

Ergotamine Exerts an Inhibiting Action on the Sympathetic.—Dreyfus summarizes the researches made by various authors on ergotamine. He concludes that the inhibiting action of the alkaloid on the sympathetic nervous system is incontestable. Therefore ergotamine should be used in all cases in which sympathicotonia is present. It is especially indicated in preoperative and postoperative treatment of exophthalmic goiter. From two to five tablets, each containing 0.001 Gm. of ergotamine tartrate, are given daily for a week. The treatment may be repeated once or twice at from three to five day intervals.

61: 305-340 (April 2) 1927

Pathology of Digestive Tract in 1927. P. Carnot and H. Gaehlinger.—p. 305.
*Pathogenesis of Pyloroduodenitis. L. Bouchut and P. P. Ravault.—p. 322.
Gastroptosis and Gastric Ulcer. Faroy et al.—p. 327.
Study of Diaphragmatic Eventration. P. Jacquet.—p. 330.
Clinical Value of Gastroscopy. J. Rachet.—p. 335.
Pernicious Anemia and Gastric Ulcer. P. Carnot et al.—p. 338.

Cases of Pyloroduodenitis: Its Pathogenesis.—Bouchut and Ravault call attention to a disease the syndrome of which resembles surprisingly that of gastric or of duodenal ulcer. The lesions in this instance consist of parenchymatous and interstitial inflammation of the pyloric and duodenal mucosa. It is probable that many supposed ulcers of the stomach, subsiding in a few weeks under medical treatment, are nothing else than pyloroduodenitis. The theory is that the latter is caused by primary infection of the mucosa by a micro-organism the character and manner of invasion of which are still unknown. Improper alimentation and alcoholism are adjuvant factors. The pyloroduodenitis may prove to be a preulcerous stage of gastric ulcer. Operation is justified only if diet and persistent medical treatment fail. Two of seven cases observed are described.

Presse Médicale, Paris

35: 401-416 (March 30) 1927

Mikulicz's Drain in Intestinal Surgery. J. L. Faure.—p. 401.
*Search for Tubercle Bacilli in Gastric Contents. P. F. Armand-Delille and J. Vibert.—p. 402.

Examination of Gastric Contents for Bacteriologic Diagnosis of Pulmonary Tuberculosis in Young Children.—Armand-Delille and Vibert point out that in young children bacteriologic diagnosis of pulmonary tuberculosis is usually impracticable, since sputum cannot readily be obtained. To remedy this situation, they suggest lavage of the stomach. From 80 to 100 cc. of tepid boiled water is introduced into the child's stomach as soon as it awakes in the morning. The aspirated water contains bronchial secretions swallowed by the child. The secretion is isolated by centrifugalization. Tubercle bacilli were found by this method in 30.9 per cent of the 174 gastric contents examined. In thirteen of the positive cases, the presence of the bacilli confirmed the physical and the roentgenologic signs; in eighteen cases, the only other indications of the diseases were the roentgenologic signs; in three cases, physical and roentgenologic signs were both absent.

35: 417-432 (April 2) 1927

*Sclerosis of Island of Reil and Periaxial Encephalitis. C. Foix and J. Marie.—p. 417.
Hemorrhagic Pleurisy with Artificial Pneumothorax. V. Hinault.—p. 420.

35: 433-448 (April 6) 1927

Clinical Varieties of Progeria. E. Apert and P. Robin.—p. 433.
Aortic Aneurysm and Pulmonary Tuberculosis. J. Génévrier and H. Descomps.—p. 437.
Rôle of Kidneys and Suprarenals in Diphtheria. A. Ravina.—p. 438.

Sclerosis of the Island of Reil and Diffuse Periaxial Encephalitis.—In Foix and Marie's opinion, sclerosis of the island of Reil and diffuse periaxial encephalitis represent two clinical forms of the same disease. The first form is chronic; the second is subacute and frequently fatal. Observations of two patients, aged 14 and 63, respectively, with the chronic form, are reported. The disease is characterized by a syndrome of spasmodic paralyses, developing within a few days or weeks. Sensory disturbances, among them reduction of vision, may be an initial clinical manifestation. Mental derangement consists in apathy and slow ideation. This is succeeded by a second phase, in which periods of regression occur. The third phase is the phase of sequelae; it starts a year or a year and a half after the beginning of the disease. Paralysis of all four limbs, blindness, idiocy and epilepsy were the sequelae in the younger patient. Bilateral location of the lesions is an important differential sign from tumor of the brain. The disease may also be confounded with optic neuromyelitis. The latter can be distinguished by the changes in the cerebrospinal fluid and by the difference in its course. In children, sclerosis of the island of Reil should not be mistaken for infantile encephalitis.

35: 449-464 (April 9) 1927

Hyperacidity of Feces in Pulmonary Tuberculosis. A. Courcoux and R. Godel.—p. 449.
*Diagnostic Value of Position in Dilatation of the Stomach. G. Leven.—p. 453.
Results of Suprarenalectomy in Gangrene of the Extremities. J. Sénèque.—p. 454.

Diagnostic and Therapeutic Value of Position in Dilatation of the Stomach.—Leven emphasizes that hypersensitiveness of the solar plexus, accompanying dilatation of the stomach, is distinctly revealed only when the patient is in the upright position. Examination of the patient in the recumbent position is without diagnostic value, since the solar hypersensitiveness is then greatly reduced. The pain that appears in the erect position, when the stomach is raised, and disappears in the prone position, when the stomach is displaced downward, is called by Leven "signal pain." The diagnosis of dilatation of the stomach cannot be definitely established unless the reflex orthostatic symptoms are explored. The results of examination for the "pain signal" were always confirmed by roentgenograms. These results are more important than the classic clapotage symptom. The latter may be absent in excessive dilatation, or it may occur in aerophagy without dilatation. Placing the patient in an appropriate position is a method of treatment. Four cases are described.

Revue de Chirurgie, Paris

45: 619-727, 1926

*Damage from Enucleation of Hydatid Cysts. F. Dévé.—p. 619.
Importance of Congenital Anomalies of the Large Intestine in Surgery. P. Hecker et al.—p. 661.

Injury from Enucleation for Hydatid Cysts.—Dévé is opposed to the practice of enucleating hydatid cysts wherever they are located. With this operation, accidental opening of the cyst and secondary echinococcosis can readily occur. Besides, the adjacent visceral tissue is necessarily removed with the cyst and the functioning of the organ is consequently impaired. Only in cases in which atrophy of the involved organ is already considerable or in cases in which the cystic adhesions are insignificant, is enucleation allowed. The preferred method of intervention is the following: The exposed cyst is punctured, and then filled with formaldehyde. After this, the cyst is incised, and the mother membrane extracted. The edges of the outer coat are sutured. A drain is not required.

Revue Française d'Endocrinologie, Paris

4: 381-460 (Dec.) 1926

*Hyperglycemia Induced by Secretin. H. Hermann.—p. 381.
*Activity of Insulin and Dysfunction of Endocrine Glands. G. P. Sacharoff and J. S. Danenkoff.—p. 416.

Hyperglycemia Following Injections of Secretin.—Hermann's researches were made on dogs with a pancreatic fistula. Injections of secretin, prepared by the Bayliss-Starling method (the technic is given), were followed immediately by hyperglycemia. The average increase of the blood sugar was 25 per cent of the initial glycemia. The hyperglycemia lasted half an hour; it was succeeded by hypoglycemia. Further, by means of alcohol, secretin was separated from associated hypotensive substances. The secretin and these substances were injected separately in another series of animals. There was evidence that the primary hyperglycemia is due to the hypotensive products. The action of secretin consists in stimulation of the pancreatic secretion; it causes the hypoglycemia. In seven transfusion experiments, both suprarenals were removed from the recipient dog; then the jugular vein was anastomosed with the suprarenal vein of the donor dog. The latter was injected with secretin. This resulted in an increase of epinephrine secretion in the recipient dog. The origin of hyperglycemia from secretin is thus traced to the organs secreting epinephrine.

Paradoxical Action of Insulin and Dysfunction of Endocrine Gland.—Sacharoff and Danenkoff's study tended to verify the influence of certain substances on the action of insulin on the blood sugar. Fasting rabbits were given an injection of insulin, followed soon by an injection of one of the substances tested. Small doses of calcium increased the action of insulin; large doses considerably decreased its action. Magnesium constantly reenforced the effect of insulin. The action of sodium, potassium and phosphate was analogous to that of calcium. Distilled water appeared to enhance the action of insulin. The results confirm Kraus' theory that electrolytes play an important rôle in hormonal activity. Diet,

fatigue, possibly even the seasons influence the effect of the hormone. In addition, changes in ion reactions induced by lesions of an endocrine gland may influence the action of a hormone on the intact gland.

Schweizerische medizinische Wochenschrift, Basel

57: 241-264 (March 12) 1927

*Lymphatic Reaction. M. L. Schmidheiny.—p. 241.
Permeability of Skin for Ultraviolet Rays. J. von Ries.—p. 248.
Fractures of Diaphyses of the Leg Bones. Cornioley.—p. 250. C'en.
Catarrhal Proctitis. O. Schirmer.—p. 258.

Lymphatic Reaction.—Schmidheiny reports in detail ten cases of acute lymphadenosis with lymphocytosis. Several of these patients had jaundice. The prognosis is good, but the differential diagnosis from acute lymphatic leukemia is difficult. Naegeli considers the deep basophilia of the cytoplasm in the lymphatic reaction as important in this respect.

5: 265-288 (March 19) 1927

Technic of Roentgenoscopy. H. Lossen.—p. 265.
*Injuries from Surgical Diathermy. M. Schaefer.—p. 268.
Recurrent Tubal Pregnancy. M. Wetterwald.—p. 271.
*Besredka's Tuberculosis Reaction. V. E. Badoux.—p. 274.
Talma's Operation. R. Hoffmann.—p. 277.
Treatment of Influenza. E. Baumann.—p. 277.

Injuries from Surgical Diathermy.—From Clairmont's clinic Schaefer reports three cases of grave injury due to the use of surgical diathermy. Two of them occurred in abdominal operations. Resection of the necrotic part of the intestine saved the life of one of the patients. The other died from perforation of the colon. Another death was probably due to the passage of a part of the current through the heart in an intervention made for empyema.

Besredka's Tuberculosis Reaction.—Badoux found that Besredka's method of serodiagnosis of tuberculosis does not give reliable results in tuberculosis in guinea-pigs. The cause lies in some peculiarity of the serum of the guinea-pig.

Pediatria, Naples

35: 289-344 (March 15) 1927

Treatment of Leishmaniasis. L. Auricchio.—p. 289.
*Physicochemical Constants in Anemias. M. Giuffrè.—p. 301.
Associated Scarlet Fever and Measles. B. Peschle.—p. 309.
Mongolism. A. Zallocco.—p. 323.

Physicochemical Constants in Anemias.—Giuffrè found a lowered surface tension of the serum in anemias of various origins (secondary, leishmaniasis, Jaksch's, myxedema).

Policlinico, Rome

34: 379-414 (March 14) 1927

*Nature of Wassermann Reaction. F. Tonietti.—p. 379.
Insulin Treatment of Diabetic Gangrene. G. Pittiani.—p. 382.
"Action of Potassium Iodide on Mercuric Cyanides." E. Pittarelli.—p. 385.
The "Visiting Physician." S. Sberna.—p. 386.

Nature of Wassermann Reaction.—With Van Slyke's method, Tonietti determined the amount of amino-acids in the filtrate from serums coagulated by trichloracetic acid. In healthy individuals and in patients with various diseases, the concentration was from 4 to 6.5 mg. per hundred cubic centimeters. It was increased to from 9.1 to 15 mg. per hundred cubic centimeters in individuals with a positive Wassermann reaction. The parallelism was especially striking in three malaria patients who had a positive Wassermann reaction and increased concentration of amino-acids only during the attacks, after which the reaction was negative.

34: 105-152 (March 15) 1927. Surgical Section

*Fractures of Hand and Foot. S. Diez.—p. 105.
Unusual Localizations of Lipomatosis. A. Turco.—p. 138.

Fractures of Hand and Foot.—Diez studied the fractures of long bones of the hand and foot with special regard to self-inflicted injuries. The only method which may give a hint to a physician in this respect is the comparison of the fracture with the alleged accident. Such subjects try to limit the injury to the desired extent and this frequently allows one to prove that the fracture could not have been produced in the way which they describe.

34: 105-152 (March 1) 1927. Medical Section

Secretion of Fasting Stomach. V. Debenedetti.—p. 105. C'td.
Optimum Secretion in Hyperchlorhydria. F. Alzona.—p. 118.
*Gastro-Intestinal Ulcers of Central Nervous Origin. F. Battaglia.—p. 133.
Bilateral Pulsating Exophthalmus. A. Bigoni.—p. 142.

Gastro-Intestinal Ulcers of Central Nervous Origin.—Battaglia observed erosions and hemorrhages in the stomach and intestine of dogs after injury to the optic thalamus.

Rivista di Clinica Pediatrica, Florence

25: 145-216 (March 15) 1927

*Infectious Erythema. G. Taccone.—p. 145.
The Thyroid in Tuberculous Children. R. Dardani.—p. 163.

Infectious Erythema.—Taccone observed an epidemic of infectious erythema ("fifth disease"). The peculiar "geographic" distribution of the erythema and the frequent changes of its intensity and apyrexia are confirmed. The leukocyte count was almost normal.

Pediatría Española, Madrid

16: 1-32 (Jan.) 1927

*History of Diphtheria. D. Jesús Sarabia y Pardo.—p. 1.
Advantages and Disadvantages of Wet-Nurses. M. González-Alvarez.—p. 10.

Earliest Spanish References to Diphtheria.—In his book, "Libro de Epidemiologia Española," published in 1803, Joaquín Villalba collected all the references that he could find to diphtheria and other communicable diseases. The earliest mention of the disease in Spanish is a reference to an epidemic of malignant angina or "tabardillo" in 1610. The outbreak spread from Spain to Italy, and lasted about twenty years. The disease is not mentioned either by the Arabian writers or by Juan Alfonso and Pedro Vázquez as late as 1600, but references to it are common all through the seventeenth and eighteenth centuries.

Progresos de la Clinica, Madrid

35: 161-240 (March) 1927

Asthma and Diet. J. Verdes Montenegro.—p. 161.
Perforations of the Esophagus. V. Faíren.—p. 164.
Acquired Pulmonary Stenosis. A. Crespo Alvarez.—p. 172.
Opticociliary Neurotomy. J. Basterra.—p. 175.
Tuberculosis of the Mammary Gland. E. Slocker.—p. 177.
*Local Autohemotherapy in Trachoma. A. Campoy Ibáñez.—p. 185.
*Serology of Leprosy. J. Bejarano.—p. 207.

Autohemotherapy of Trachoma.—In 157 patients with trachoma, Campoy tried local autohemotherapy (washing the eye with blood from the patient). His statistics show 63.69 per cent unconfirmed cures; 31.84 per cent confirmed cures; 2.54 per cent recent cures, and 1.91 per cent improvement when the patients stopped treatment. The method has proved useful in both sexes and at all ages. There are no contraindications nor eye reactions. Results are obtained more quickly than with any other method. Campoy describes in detail his cases, and the method and the devices which have proved most efficient. From seven to twelve treatments were given; the time needed for recovery was from sixteen to forty-three days.

Serology of Leprosy.—In twenty-two lepers studied by Bejarano, the blood Wassermann reaction was positive in 52.5 per cent, the Hecht reaction in 60 per cent and the Meinicke reaction in 36 per cent. The tubercular type gave the largest number of positive reactions, the anesthetic type the largest number of negative reactions. The syphilitic antigen proved the most efficient in the tubercular type and the cholesterolized normal in the mixed type. The sedimentation speed test has no relation to the serum reactions. These change comparatively quickly, in accordance with the florid nature of the disease. Treatment alters the reactions, but not as quickly as in syphilis. The spinal fluid reaction is regularly negative.

Revista de Especialidades, Buenos Aires

1: 709-1112 (Dec.) 1926. Partial Index

Lucid Intervals. N. Rojas.—p. 709.
Traumatic Neurosis. M. Alurralde and M. J. Sepich.—p. 720.
Results of Ventriculography in Brain Tumor. V. Dimitri and M. Balado.—p. 751.
Histology of Acute Ascending Paralysis. M. Alurralde and M. J. Sepich.—p. 808.

Melancholy Stupor and Parkinson's Disease. J. M. Obarrio.—p. 834.
Jacksonian Epilepsy and Astereognosis Caused by Glioma. M. Alurralde et al.—p. 908.
*Congenital Hydronephrosis in Brothers. L. E. Pagliere.—p. 938.
*An Uncommon Accident Following Prostatic Massage. E. Castaño.—p. 953.
*An Unusual Complication of Gonorrhea. R. Spurr.—p. 964.
Epidemic Encephalitis with Ocular Disturbances. E. Bernasconi Cramer and E. Adrogué.—p. 980.
Associated Eye Lesions. J. Lijó Pavia and M. Dusseldorp.—p. 985.
Ocular Symptoms of Myasthenia Gravis Pseudoparalytica. M. Dusseldorp.—p. 1001.
Flattening of the Cornea. E. Adrogué and B. Courtis.—p. 1051.
A Case of Infantile Scurvy. M. Acuña and M. T. Vallino.—p. 1059.
*Ascarid Infection in Infants. M. J. del Carril.—p. 1071.
Malformations of Trachea and Esophagus. J. Bacigalupo and M. J. Vergnolle.—p. 1103.

Congenital Hydronephrosis in Two Brothers.—The photographs show the types of congenital hydronephrosis in two brothers. One had in addition a thickened ureter. In the other the defect seemed to be due to a slightly spiral ureteral implantation. Pressure exerted on the pelvis did not elicit urine.

Accident Caused by Prostatic Massage.—While Castaño's patient was massaging his own prostatic gland, a vein tore. An enormous hematoma developed. Castaño has not found a similar case in the literature.

Uncommon Complication of Gonorrhea.—Spurr describes the case of a boy, aged 19, who lost the use of his legs and all muscular power two months after contracting gonorrhea. No spontaneous pain existed, but the slightest pressure on the back of the thigh caused severe pain. With treatment aimed at the gonococcus, the patient gradually recovered the use of his legs. The therapeutic response confirmed the diagnosis of sciatic neuritis of gonorrheal origin.

Ascarid Infestation Resembling Meningitis in an Infant.—A girl, 22 months old, was brought to the hospital with meningeal symptoms. From the history, it appeared that worms had been expelled. Lumbar puncture yielded no sign of meningitis. Santonin was used and a large number of ascarids were eliminated, after which the patient improved and the meningeal symptoms subsided. A few days later bronchopneumonia with myocarditis developed, and the child died. At necropsy, the intestine was found filled with ascarids, some of which were present even in the stomach. The enormous number is evidence of an old condition, while the recent symptoms had been acute, appearing within the last three days. Instead of supporting the idea that ascarids may cause meningitis, the facts bear witness to the tolerance of the body to these worms.

Revista Médica de Barcelona

7: 129-227 (Feb.) 1927

Influence of Spinal Anesthesia on Intestinal Peristalsis. F. Doménech Alsina.—p. 132. C'td.
*New Stain for Fats. A. Ferrer Cagigal.—p. 150.
Cystic Embryoma of the Omentum. A. Trias Pujol.—p. 152.

Stain for Fats.—Ferrer used paprika with much success as a stain for fats. It is extracted in alcohol and ether until a soluble precipitate is obtained.

Revista Médica Latino-Americana, Buenos Aires

12: 617-759 (Feb.) 1927

*Treatment of Umbilical Hernia. R. Araya and A. G. Neumann.—p. 617.
Köhler's Disease of the Tarsal Scaphoid. C. Lugones.—p. 641.
Hemangioendothelioma of the Thyroid. D. Vivoli and P. A. Etchegorry.—p. 659.
Cheilitis Glandularis. J. J. Puente and A. Acevedo.—p. 671.
Etiology and Treatment of Diabetes Insipidus. S. G. Beyrne.—p. 680.
Transvesical Prostatectomy. A. Guadagnini.—p. 695.
Dieulafoy's Insanity in Bright's Disease. J. Espejo Solá.—p. 706.
Rubino's Test in Non-Leprous Subjects. V. Castro Paullier and L. M. Errecart.—p. 711.

Surgical Treatment of Umbilical Hernia.—Araya and Neumann state their method has a number of advantages. Among 206 patients operated on, there has not been a single death or recurrence. The only contraindication is in aged women with emphysema or heart trouble. The illustrations show the different steps.

Sciencia Médica, Río de Janeiro

5: 121-173 (March 31) 1927

Study of Leishmania Infections. H. Aragão.—p. 121.
Streptobacillus Hemophilus. A. de Assis.—p. 133.
*Blood Agglutinins in Brazilians. J. Aben-Athar.—p. 145.
The Leprosy Problem. H. C. de Souza Araujo.—p. 154.

Blood Groups in Brazilians.—In a miscellaneous series of 274 Brazilians, 50 per cent belonged to group 1; 29.5 per cent to group 2; 17.8 per cent to group 3, and 2.5 per cent to group 4. The biochemical index, i. e., the ratio between groups 2 and 3 (B) was 1.6. Among eighty-four white Brazilians, the proportions represented by the different groups were respectively, 42.8, 40.4, 14.2 and 2.3 per cent; among forty-six Portuguese, 34.7, 47.8, 13.0 and 4.3 per cent; among ninety-three half-breeds, 51.6, 31.1, 15.0 and 2.1 per cent; among seventy-two mulattoes, 44.4, 33.3, 19.4 and 2.7 per cent; among sixty-five half-breed Indians, 61.5, 15.3, 21.5 and 1.5 per cent, and among thirty-two negroes, 40.6, 25.0, 28.1 and 6.2 per cent, respectively. The negroes and half-breeds have for some time shown a progressive decrease in Brazil. The Jansky numbering was used in the study.

Semana Médica, Buenos Aires

34: 769-832 (March 31) 1927. Partial Index

New Technic for Isolating the Soft Palate in Rhino-Pharyngeal Operations. L. Samengo.—p. 769.
The New Methods of Treating General Paralysis. G. Revault D'Allonnes.—p. 775.
Melancholy Stupor and Its Relation to Parkinson's Disease. J. M. Obarrio.—p. 778.
*Radium Therapy of Cancer of the Eyelid. N. Capizzano.—p. 795.
Abscess of the Liver. G. Segura.—p. 799.
*Leukocyte Count in Rabies. R. Esquivel and C. G. Lasta.—p. 804.
*Treatment of Burns with Brewers' Yeast. A. Cappelletti.—p. 815.
*Insulin in Dermatology. J. J. Darnet.—p. 819.

Radium in Cancer of the Eyelid.—Recently (1924-1926), Capizzano has treated seventy cases of epithelioma of the eyelid with radium exclusively. The cures amount to 74.28 per cent. Recurrences have not been more frequent than with other forms of treatment. The ages of the patients were from 20 to 80 years.

Leukocyte Count in Rabies.—In rabbits inoculated with fixed virus, Esquivel and Lasta found an average increase of neutrophils of 79.77 per cent; the lymphocytes decreased on the average 60.32 per cent in fifteen out of eighteen cases; the changes in the monocytes were inconstant; the eosinophils decreased 100 per cent in thirteen out of eighteen cases and from 10 to 60 per cent in the rest; the mast cells decreased on an average 58.53 per cent in fourteen cases and increased in four.

Yeast in the Treatment of Burns.—Dressings impregnated with brewers' yeast gave excellent results in the treatment of burns in Cappelletti's cases. The method was suggested by Plantier.

Insulin in Skin Diseases.—In all cases of a chronic skin lesion, Darnet advises investigation of the blood sugar. If a high content is found, insulin should be tried. Even when the figures are normal, an induced hyperglycemia test may yield a different result. In more than 100 cases of eczema, furunculosis, psoriasis, arsenical erythroderma, ulcers of the leg, intertrigo and acne, insulin was used and proved curative in many. The dosage was rather high, occasionally as much as 100 units a day.

Archiv für Kinderheilkunde, Stuttgart

80: 161-240 (March 18) 1927

*Angina with Lymphatic Reaction. E. Koenigsberger.—p. 161.
Diet in Fever. S. Ederer and E. Kramár.—p. 171.
Paratyphoid B, Breslau Type, in Infants. F. Goebel.—p. 181.
*Ossification of Carpus and Forearm. A. Munk.—p. 185.
*Retention of Salts in Infants. E. Rominger and H. Meyer.—p. 195.

Tonsillitis with Lymphatic Reaction. — Koenigsberger observed eighteen cases of acute lymphadenosis in children. The high fever and absence of general depression speak against acute leukemia, the lymphocytosis and absence of albuminuria against diphtheria. In some cases only a retrospective diagnosis can be made—for instance in one of their

patients in whom the tonsillitis had apparently provoked an attack of hemorrhagic purpura. The lymphocytosis lasts for several weeks or months.

Ossification of Carpus and Forearm.—Munk measured the size of the centers of ossification in the bones of the carpus and distal end of the radius and ulna in children of various ages between birth and puberty.

Retention of Salts in Infants.—Rominger and Meyer found that the retention of minerals in healthy infants (breast-fed and artificially fed) depends to a large degree on the amount of minerals in the food. Therefore, the artificially fed infant suffers a certain degree of supermineralization, without corresponding retention of water, which, however, does not seem to cause any trouble.

Deutsche medizinische Wochenschrift, Berlin

53: 475-516 (March 18) 1927

Chronic Appendicitis. M. M. Gubergritz.—p. 476.
Paths of Tuberculous Infection. W. Strauss.—p. 481.
Lipoid Treatment of Tuberculosis. M. Reichelt.—p. 483.
*The Interfereometric Method. A. Streck.—p. 484.
Blood Sugar in Rabbits. M. Lévai et al.—p. 488.
*Nitrite Test of Urinary Infection. R. Hirsch.—p. 489.
Diet in Fever. S. Ederer and E. Kramár.—p. 490.
Abscess of the Brain. E. Siemerling.—p. 491.
Cerebral Paralysis in Children. E. Siemerling.—p. 492.
Survey of Otorhinolaryngology. M. Meyer.—p. 493.
Infectious Diseases. H. Deicher.—p. 495.
Medical Police. Lindenau.—p. 495.
Social Insurance and Physicians. S. Alexander.—p. 498.
Autonomous Characterology. E. Utitz.—p. 499.
Stuttgart Society for Study of Personality. Basler.—p. 501.

Interfereometric Method.—Streck found that the precautions recommended in making the interfereometric modifications of Abderhalden's test are irrelevant. Furthermore, he saw no difference in the reaction when the serum was incubated with the organ powder for twenty-four hours, as directed, or for one hour or for three days. Room temperature was just as good or bad as the incubator. He attributes the observed concentration of the serum to imbibition of the organ powder by the water of the serum.

Nitrite Test in Urine.—Hirsch confirms the advantages of the Weltmann-Haslinger technic for determination of nitrites in the urine. Fresh urine is mixed with an equal volume of Gries' reagent, consisting of 0.2 Gm. of alphanaphthylamine dissolved in 20 cc. of boiling water and filtered into 150 cc. of diluted acetic acid. This solution is mixed with a solution of 0.5 Gm. of sulphanilic acid in 150 cc. of diluted acetic acid. The mixture is stable in a dark bottle. A red color indicates the presence of nitrites. A negative reaction means either that the urine is sterile, or that it is infected with bacteria which do not form nitrites (gonococci, streptococci or tubercle bacilli). Two further possibilities are that not enough nitrites have been formed or that the urine did not contain enough nitrates. These last two possibilities are checked in the following manner: A two hour incubation at 37 C. gives the bacteria time to produce enough nitrites. Another sample of urine is incubated for one-half hour after the addition of a few drops of a 10 per cent solution of sodium nitrate, and is then tested for nitrites. A positive nitrite reaction in an acid urine makes a colon bacillus infection highly probable. Any positive result is reliable; negative results do not exclude infection.

Klinische Wochenschrift, Berlin

6: 481-528 (March 12) 1927

Action of Mineral Waters. K. Harpuder.—p. 481.
*Measuring Physical Fatigue. W. Strauss.—p. 483.
*The Blood Under Low Atmospheric Pressure. C. Seyfarth.—p. 487.
Roentgen-Ray Treatment of Myomas and Metrorrhagias. F. Kauffmann.—p. 489.
*By-Effects of "Synthalin." A. Adler.—p. 493.
Cause of Congenital Soft Skull. A. Eckstein and A. Sindler.—p. 494.
Hepatic Stasis and Water Elimination in Heart Diseases. E. von Haynal and G. von Dániel.—p. 496.
Variations in Sedimentation of Erythrocytes. W. Iwanow and I. Basilewitsch.—p. 497.
Specificity of Allen-Doisy's Test. S. Loewe.—p. 500.
Neuberg and Klopstock's Tuberculosis Antigen. H. Schulte-Tigges.—p. 500.
Technic of Mastic Test. W. Schmitt.—p. 501.
Shellac Reaction of the Cerebrospinal Fluid. A. Marchionini.—p. 501.
Tuberculosis of the Spleen. A. Hallermann.—p. 502.
High Altitudes and the Circulation. W. Löffler.—p. 503.
Medical Climatology. F. Baur.—p. 506.
Physician and Medical Man. W. Trendelenburg.—p. 526.

Measuring Fatigue.—Strauss measured the electric current derived from the upper extremity and from the mucous membrane of the lower lip. He found that fatigue lowers the difference of potential between these two regions (by increasing the potential of the skin). The time required for restitution seems to be fairly constant in the same individual. He hopes to develop this method to an objective measurement of fatigue.

The Blood Under Low Atmospheric Pressure.—Seyfarth observed an increased percentage of erythrocytes with supravital granulations in animals kept at low air pressure. The rapidity of the increase depends on the general condition of the animal. The granular erythrocytes have a larger diameter than the mature cells.

By-Effects of "Synthalin."—Adler noted an increase of urobilinogen in the urine of patients treated with "synthalin." In addition to this, Holzweissig observed a case of jaundice apparently due to this treatment. The gastro-intestinal disturbances following the use of "synthalin" may be prevented by the simultaneous administration of biliary salts—for instance, 0.5 Gm. of sodium dehydrocholate with every dose of "synthalin."

Medizinische Klinik, Berlin

23: 385-424 (March 18) 1927

*Action of Iodine on the Circulation. H. Guggenheimer and I. L. Fisher.—p. 385.
Malignity of Goiter. H. Flörcken and O. Mues.—p. 388.
The Latest Epidemic of Influenza. H. Taterka and M. Landsberg.—p. 389.
Scleremia Adultorum. E. Hofmann.—p. 392.
"Reducing" Treatments. F. Kisch.—p. 393.
Ectopia of Testis. W. Hoffmeister.—p. 397.
Treatment with Electric Currents. H. Lamberg.—p. 397.
Protection Against Skin Burns in Diathermy Treatment. E. Last.—p. 399.
Atoxyl-Resistant Lipase. D. Segenschmid.—p. 400.
Multiple Sclerosis, Paralysis of Peroneus and Nitrobenzene Poisoning. F. Föhrenbach.—p. 404.
Tumors of the Spinal Cord. K. Singer.—p. 405.
*Influenza and Alcohol. Bornstein.—p. 422.

Action of Iodine on the Circulation.—Guggenheimer and Fisher determined the action of iodides on the isolated heart. At first—with perfusion containing iodine diluted 1:75,000—they noted only a depressing effect on the contractions. With increasingly high dilutions—up to 1:5,000,000—there was besides this a distinct vasodilation, evidenced by increase in the perfusion rate. Further dilutions (1:12,500,000) were inactive. They point out that the normal iodine content of the blood (from 1:8 million to 1:12 million) is just below the lower limit of action of iodides. They had good therapeutic results in angiospastic conditions with the daily administration of from 0.015 to 0.03 Gm. of sodium iodide, divided into from three to six doses. Because of the simultaneous depressive action on the heart, the treatment should be combined with theobromine preparations or supplanted by them, if the heart is failing or in malignant sclerosis of the kidneys with permanent high blood pressure.

Influenza and Alcohol.—Bornstein, secretary of the Association of German Total Abstainer Physicians, points out that the alleged protective action of beer or other forms of alcohol in influenza is not established scientifically, and quotes against it another physician who claimed to have cured 299 soldiers suffering from influenza without the use of alcohol.

Monatsschrift für Geb. und Gynäkologie, Berlin

76: 1-90 (March) 1927

"Air Test of the Intactness of the Placenta." A. Haba.—p. 1.
Treatment of Mastitis with Autohemotherapy, Bardenheuer's Incision and Secondary Suture. Harttung.—p. 4.
*"Skull Trauma." E. Martin.—p. 7.
Diagnostic Errors in Uterus Bicornis. H. Siegmund.—p. 10.
Pyosalpinx with Abscesses of Liver and Brain. A. Esser.—p. 21.
Inflammatory Changes in Myoma. O. Frankl.—p. 27.
Causes of Sterility and of Tubal Pregnancy. F. Kok.—p. 32.
The Glove in Obstetrics in 1758. E. Ebstein.—p. 39.

"Skull Trauma."—Martin vigorously opposes those pathologists who recently (at the meeting of the Deutsche Gesellschaft für Kinderheilkunde) urged more active measures on the part of obstetricians, in order to avoid injury to the brain and the vessels of the skull of the child from the birth process. Such an injury is rare, and in no wise justifies a departure from conservative practice.

Wiener Archiv für innere Medizin, Vienna

14: 1-192 (March 15) 1927

*Angina Pectoris and Insufficiency of Right Ventricle. S. Wassermann.—p. 1.
Retrograde Ventricular Extrasystoles. B. Samet.—p. 11.
Intraventricular Disturbances of Conduction. B. Samet.—p. 15.
Chlorine Metabolism and Gastric Secretion. G. Holler et al.—pp. 21 and 75.
*Functional Dissociation of Respiration. L. Condorelli and E. Rechnitzer.—p. 49.
*Pregnancy and Heart Block. W. Dressler.—p. 83.
*Congo Red in Diagnosis of Amyloidosis. U. Strasser.—p. 97.
"Blood Enzymes and Pregnancy." J. Hofbauer.—p. 111.
Sensitiveness of Heart and Large Vessels. R. Singer.—p. 113.
Peptidases, Especially in Fever. L. Böhmig.—p. 129.
*Splenomegalic Lymphogranulomatosis. G. Holler and K. Paschkis.—p. 149.
Displacement of Tissue by Pneumonia. R. Flecksederr.—p. 163.
Effect of Insulin on the Specific Dynamic Action of Foods. A. Sachs et al.—p. 175.

Angina Pectoris and Insufficiency of Right Ventricle.—In certain patients with angina pectoris Wassermann found an enlargement of the liver due to insufficiency of the right ventricle. With insufficiency of the left ventricle, the attacks of angina pectoris cease, as a rule.

Functional Dissociation of Respiration.—Condorelli and Rechnitzer studied volitional forced apnea in healthy subjects. In spite of an occlusion of the respiratory passages, unavailing respiratory movements appear after a time and increase until the subject gives up his voluntary apnea. The first movements are frequently limited to the diaphragm without any participation of the auxiliary muscles. The authors also discuss the mechanism of Cheyne-Stokes' respiration.

Pregnancy and Heart Block.—Dressler confirms the fact that complete heart block may not impair the prognosis of pregnancy, if careful examination excludes the possibility of serious myocarditis. On the contrary, partial heart block—even the slightest disturbance of the conduction—may signify extensive involvement of the myocardium and, as a rule, contraindicates pregnancy and especially labor.

Congo Red in Diagnosis of Amyloidosis.—Strasser's experience with this test was good. He observed retrogression of the amyloidosis in a young girl after amputation of the leg for osteomyelitis of the tibia. The associated nephritis, however, was not influenced.

Splenomegalic Lymphogranulomatosis.—Holler and Paschkis report two cases of lymphogranuloma of the spleen. One of the patients had a typical hemolytic jaundice, and the unexpected supplementary diagnosis was made on the extirpated spleen.

Wiener klinische Wochenschrift, Vienna

40: 341-376 (March 17) 1927

Blastocystic Infection in Man. A. Luger.—p. 341.
Disseminated Encephalomyelitis. E. Redlich.—p. 344.
*Blood Groups and Therapeutic Malaria. J. Wendlberger.—p. 345.
Successive and Simultaneous Bilateral Pneumothorax. H. Maendl.—p. 347.
Spontaneous Chylothorax in Childhood. E. Fürth.—p. 350.
*Neuralgia of the Brachial Plexus. L. Popp.—p. 354.
Insulin in Intensive Feeding in Sanitariums. F. Lang.—p. 355.
Treatment of Menstrual Disturbances. R. Hofstätter.—p. 356.
Value of Electrocardiogram to Practitioner. R. Gussenbauer.—p. 358.
Mechanotherapy in Heart Diseases. E. Freund.—p. 359.
Function Test of Vegetative Nervous System. E. Spiegel. Supplement. —pp. 1-16.

Blood Groups and Therapeutic Malaria.—Wendlberger determined the blood groups in his fifty cases of therapeutic malaria. He gained the impression that the intravenous injection succeeds better if the donor's erythrocytes are not agglutinated by the recipient's serum.

Neuralgia of the Brachial Plexus.—Popp's patient recovered after removal of a cervical rib.

Zentralblatt für Chirurgie, Leipzig

54: 129-192 (Jan. 15) 1927

*Treatment of Fistulas of Duodenum and Small Intestine. J. Volkmann. —p. 130.
*Treatment of Diseases of the Mammary Gland with Pathologic Secretion. S. Erdheim.—p. 131.
*Treatment of Bleeding Nipple. E. Risak.—p. 134.
*Reply to Erdheim and Risak H Klose.—p. 136.
*Etiology and Treatment of Bleeding Nipple. B. O. Pribram.—p. 139.
Intra-Abdominal Bleeding from the Ovary During Menstruation. O. Dieter.—p. 142.
*Injury to the Bladder During Herniotomy. B. Weksner.—p. 143.
*A Case of Gastro-Ileostomy. J. Galpern.—p. 144.
Pseudometeorism Simulating Tuberculous Peritonitis. O. Wiedhopf.—p. 145.

Treatment of Fistulas of Duodenum and Small Intestine.—In a case of duodenal fistula after cholecystectomy, at which drainage of the common bile duct had been established, Volkmann introduced a catheter from the common bile duct into the efferent duodenum, with the object of supplying nourishment and of allowing the fistula to dry. The patient died shortly after, perhaps because the procedure was not thought of till too late. He also recommends that the method originated by McKenna for treating postoperative paralysis of the stomach be tried in duodenal fistula. The jejunum is exposed just beneath the duodenojejunal flexure and secured to the wound with sutures. Two catheters (number 18) are then sutured in, side by side, so that one leads to the stomach, the other to the small intestine.

Treatment of Bleeding Nipple.—Erdheim's standpoint is that a mutilating radical operation, with removal of the axillary glands, is not necessary in all cases of bleeding nipple. The latter is a symptom common to a number of pathologic processes, many of which can be cured by resection. In papilloma of the lactiferous ducts and the so-called precancerous process, the diseased tissue may be excised and the opinion of the pathologist obtained before proceeding further. He holds that the surgeon's aim should be the smallest operation that will produce a cure. Risak states that the standpoint of Hochenegg's clinic is that while operation is always indicated in case of bleeding nipple, a mutilating operation is not justified unless there is clinical or histologic evidence of carcinoma. Klose, replying to Erdheim and Risak, regrets that the discussion has become one of operative methods. There is great need of research by surgeons on the transition stages between benign and malignant growths. If only those lesions which are certainly carcinoma are treated radically, the statistics of recurrence will remain as they are. Improvement can come only from radical operation in precancerous stages. In his experience, bleeding nipple has proved a reliable guide. Atypical epithelial proliferations have been found in every case. A larger material is necessary to a final decision in the question, but, when this decision is arrived at, the question of what operation is best will be answered automatically. Pribram affirms that in a large majority of cases the cause of bleeding nipple is a lesion which he designates as hemorrhagic cystepithelioma. This lesion he describes at length. It is a papilliform epithelioma in a lactiferous duct which has undergone cystic enlargement. It is a localized process, near the nipple. The mammary gland may be entirely unchanged. Bleeding is the rule. The cyst varies in size from a pea to an orange. The overlying skin is usually not freely movable, but retraction of the nipple is rare. Bleeding from the nipple may precede the palpable tumor by many years. The tendency to metastasis is not great, and the axillary glands are nearly always free. The possibility of carcinomatous degeneration undoubtedly exists, and amputation of the breast should be practiced, but the necessity for removing the axillary glands does not appear to exist, if the lesion is, with certainty, a cystepithelioma.

Bladder Sutured to Poupart's Ligament During Herniotomy.—A young woman was confined to bed for eight months after operation on a left (probably inguinal) hernia. Her symptoms, which started the day after the operation, were pain in the bladder, bloody urine and a frequent desire to urinate, associated with pain. A second operation showed that the bladder had been sutured to Poupart's ligament. It was freed and the patient recovered.

Gastro-Ileostomy.—Six months after operation for gastric ulcer, the symptoms returned with increased severity. A second laparotomy revealed that at the first operation the ileum, instead of the jejunum, had been joined to the stomach. A typical peptic ulcer was present in the intestinal wall opposite the anastomosis. The case shows that it is possible to mistake the last loop for the first, and is a warning that one should not rely on the length of the mesentery for guidance, but should work under the control of the eye.

54: 193-256 (Jan. 22) 1927

*Cholascos. E. Melchior et al.—p. 194.
Abscess of the Liver Following Appendicitis. I. von Reök.—p. 196.
Autohemotherapy in Pyogenic Lesions of the Face. R. Hinze.—p. 200.
Novelties in Bandaging Technic. H. Hans.—p. 202.
*Bringing Case Reports Up to Date. V. E. Mertens.—p. 204.

Cholascos.—The problem of the acute intoxication and chronic cachexia without jaundice which follow the effusion of large quantities of bile into the peritoneum was studied in dogs by Melchior, Rosenthal and Wislicki. They found that ligation of the common bile duct and opening of the gallbladder resulted in the collection of bile acids in the blood and tissues, in such amounts that most of the animals died from bile acid poisoning in from twenty-four to forty-eight hours. The absence of jaundice is explained by the fact that the bile pigments, taken up by the blood, are excreted into the abdominal cavity by the liver, in so far as they are not eliminated with the urine. The excretion of bile acids is a slower process. It appears from these experiments that cholemia is misnamed, and that the syndrome thus termed is a consequence of hepatic insufficiency, rather than of the presence of bile acids in the blood. In cholascos there is a true cholemia—a direct poisoning by bile acids.

Bringing Case Reports Up to Date.—Mertens suggests that brief reports of progress or of further operations on patients whose cases have already been published should be sent for publication to the central organ of the specialty concerned. In this way, the end-results of many interesting cases, now hidden away in hospital archives, would be made available.

54: 257-320 (Jan. 29) 1927

*Action of Balsam of Peru in Wounds. C. Brunner and W. Silberschmidt.—p. 261.
Treatment of Gangrenous Hernia by Invagination. E. Franke.—p. 265.
Urethral Calculi. H. Koch.—p. 266.
Serum Protein Quotients in Surgical Tuberculosis. F. Raszeja.—p. 269.
Subcutaneous Emphysema as Sign of Ulcer Perforation. J. Vigyázó.—p. 271.
Genesis and Prophylaxis of Jejunal Ulcer. W. Sternberg.—p. 272.
Ileus in Pregnancy. T. Wilhelm.—p. 274.
Primary Carcinoma of the Liver Simulating Subphrenic Abscess. B. Lubarsky.—p. 279.

Antiseptic and Antitoxic Action of Balsam of Peru in Wounds.—In Brunner and Silberschmidt's experiments, balsam of Peru prevented death in three out of four guinea-pigs in which it was introduced into a cutaneous muscle wound, together with earth containing, in lethal amounts, the microorganisms of malignant edema and tetanus. In the fourth animal, life was prolonged. In the animal that survived, a circumscribed abscess formed, which broke spontaneously. Bacilli of the Fraenkel group and a few tetanus bacilli were found in the pus. The dose of balsam of Peru was from 1 to 1½ cc.; the quantity of earth, 0.05 Gm. In a further series of guinea-pigs, the balsam of Peru was introduced into the wound six hours after the infected earth. Two of these animals survived. When the interval was longer than six hours, the balsam was without effect. The six hour interval corresponds to Friedrich's incubation time. To study the antitoxic action of the balsam, the authors introduced into a cutaneous muscle wound in guinea-pigs a lethal dose of tetanus or botulinus toxin, followed immediately by the balsam. All the animals died, although death was postponed as long as five days. A further series of guinea-pigs were treated with subcutaneous injections of balsam and toxin mixed in vitro. All the animals thus treated remained alive. Some of the doses and the intervals between mixture and injection were as follows for guinea-pigs weighing 360 and 320 Gm., respectively: balsam of Peru, 0.2 cc., tetanus toxin, $\frac{1}{120}$ cc., interval 5 minutes; balsam of Peru, 0.5 cc., toxin, $\frac{1}{50}$ cc., interval two days.

Zentralblatt für Gynäkologie, Leipzig

51: 129-192 (Jan. 15) 1927

*Intra-Uterine Pressure in Normal Pregnancy and in Hydramnion. J. Wieloch.—p. 129.
*Industrial Pathology of Pregnancy and Labor. M. Hirsch.—p. 136.
*Treatment of Eclampsia. W. Stoeckel.—p. 141.
Abdominal Circumference During Parturition. H. Baumann.—p. 150.
"Lymphocystofibroma" of the Uterus. F. Isbruch.—p. 160.
Surgical Treatment of Umbilical Hernia Associated with Obesity. R. Araya and A. G. Neumann.—p. 164.
Sedimentation Speed of Erythrocytes of the Blood of the Umbilical Cord. O. Silzer.—p. 170.
Oral Administration of Ergotamine in Gynecology and Obstetrics. O. Fohr.—p. 174.
Curettage of the Uterus by the Abdominal Route. N. Kakuschkin.—p. 179.
New Forceps for Introducing Gauze. P. Beck.—p. 181.

Intra-Uterine Pressure in Normal Pregnancy and in Hydramnion.—In three cases of hydramnion and in three cases of normal pregnancy (studied as controls) puncture of the uterus was performed from a point in the median line below the umbilicus, and the intra-uterine pressure was determined. After deductions for known sources of error, it appeared that intra-uterine pressure existed neither in normal pregnancy nor in slowly developing hydramnion.

Pregnancy and Labor in Women in the Textile Industry.—This study, made by Hirsch, comprises 3,165 completed pregnancies of women employed in the textile industry. The course of labor was pathologic in 34.4 per cent. Pathologic labors were 18 per cent more frequent in women who worked standing than in those who sat at their work. Premature births, stillbirths, forceps deliveries and cesarean sections were about 50 per cent more frequent in these women than in the general population; they were much more frequent in the women who stood than in those who sat at their work. Varicose veins occurred nearly three times as often in the women who stood as in those who sat.

Treatment of Eclampsia.—Stoeckel analyses the eclampsia cases seen at the Leipzig university women's clinic during the time that he directed it (1922-1926). The cases numbered 119. The total maternal mortality was 8.4 per cent, the corrected mortality 5.8 per cent. The mortality of the children was not quite 9 per cent. None of the babies delivered by cesarean section died. His practice is immediate delivery, followed, if it does not succeed, by venesection and narcosis. He fears that any advocacy of primary conservative treatment will lead to these patients being treated at home by physicians lacking in the skill and experience necessary for the individualization essential in conservative treatment.

51: 193-256 (Jan. 22) 1927

Injury to the Liver in Puerperal Fever. H. E. Scheyer.—p. 194.
Causes of Metabolic Disturbances in Pregnancy. A. Loeser.—p. 200.
C'en.
Pathologic Torsion of the Umbilical Cord of an Ectopic Fetus. H. Steiner.—p. 209.
Bilateral Tubal Pregnancy. G. Schwarzwäller.—p. 217.
"Morphology and Biology of the Menstrual Process in the Uterine Mucosa." H. Meyer-Rüegg.—p. 219.
Tuberculosis of the Vaginal Portion of the Uterus. A. Katz.—p. 220.
*Adhesions of the Cervix After Curettage. B. Bass.—p. 223.
*Paraffin Tamponade. A. Landeker.—p. 225.

Adhesions of the Cervix After Curettage.—In the last eighteen months, Bass has seen twenty cases of cervical adhesions after curettage. The clinical picture is as follows: A month or two after the operation, pains resembling labor pains set in. They gradually cease, but return with each menstrual period. There is amenorrhea. The uterus is in most cases smaller than normal; the corpus is tender. The condition may be mistaken for atrophy of the uterine mucosa or for amenorrhea of ovarian origin. Treatment consists in dilating the cervix with sounds.

Paraffin Tamponade.—Paraffin, heated to about 60 C., is poured into a warmed rubber speculum inserted into the vagina. The speculum is withdrawn slowly as the fluid is poured in; and the paraffin mass spreads over the vaginal walls and portio and, finally, completely fills the vaginal cavity. There is no pain, and pressure is not too great to be borne in comfort. Care must be taken on withdrawal of the speculum not to let the hot paraffin touch the sensitive struc-

tures of the introitus. When, at the end of one-half hour or of several hours, the block of paraffin is removed, the vaginal walls have undergone hyperemia and are thoroughly warmed through. There is often considerable secretion, which is succeeded in a day or two by corresponding drying of the walls. Landeker recommends this method in pelvic neuralgia and cramps, in inflammatory diseases of the uterus, parametrium and adnexa, and in leukorrhea.

51: 257-320 (Jan. 29) 1927

*An Obstetric Catastrophe. H. Sellheim.—p. 261.
Chemical Hysterectomy for Carcinoma of the Corpus. L. F. Driessen.—p. 272.
Prophylactic Injection of a Pituitary Preparation in the Third Stage of Labor. W. Sigwart.—p. 280.
*Asepsis in Small Operations on the Uterine Cavity. V. Föderl.—p. 282.
Syncytioma Malignum. H. E. Scheyer.—p. 284.
A Self-Retaining Vaginal Speculum. H. Holler.—p. 296.
*Besredka's Filtrate in Puerperal Infections. P. Tron.—p. 298.

Uterus Torn Out at Abortion—Expert Testimony.—A physician in general practice, in ending an incomplete abortion in the sixth month of pregnancy in the case of his own wife, tore out the entire uterus. The wife recovered, but an action for illegally producing abortion and for malpractice was brought against the husband. Sellheim assisted at the hearing as expert witness, and discusses the difficulties and pitfalls to which the medical witness is subjected. He makes a rule of submitting to verbal questioning only after he has deposited with the court a written statement on the matter under examination, to the preparation of which he has been able to bring a careful study of the case and the help of the literature, and to which he can refer his questioner at any moment. In the present case he formed the theory of placenta praevia, which came away with the fetus unnoticed. The placenta was still sought for by the physician, whose fingers broke through the wall of the uterus and then grasped and tore out the organ in mistake for the placenta. This theory was sustained by examination of the specimen. The husband-physician was acquitted.

Asepsis in Small Operations on the Uterine Cavity.—Föderl describes and illustrates a method for isolating the portio by a rubber sheet with an aperture in the center, after the manner in which the dentist isolates the diseased tooth on which he is working.

Besredka's Filtrate in Puerperal Infections.—With the object of producing local immunity and preventing generalization of the infection, a tampon moistened with 20 cc. of Besredka's filtrate is introduced into the vagina or uterus. On the first day, before the micro-organism has been identified, a mixed filtrate is used; from the second day on, a specific filtrate. This treatment was used in fifty cases in the State Institute for Obstetrics and Gynecology in Leningrad, and Tron reports that, when applied early, the spread of the infection was checked, and the surface of the wound became clean after one or two applications.

Meditsin. Obozr. Nizhn. Povolzhya, Astrakhan

5: 3-79 (Sept.-Oct.) 1926. Partial Index

*Effect of Quinine on Formation of Agglutinins. B. I. Kurochkin and K. G. Emelyanchik.—p. 3.
Pregnancy as a Biologic Phenomenon. N. I. Kushtaloff.—p. 49.

Influence of Quinine on Formation of Agglutinins.—Rabbits, dogs and pigeons were injected with typhoid vaccine daily for three days. At the time of immunization, and on eight successive days, the animals were given quinine hydrochloride by the mouth. Kurochkin and Emelyanchik state that examination of the blood serum showed that the amount of agglutinins was lower in the animals treated with quinine than in the controls. The reduction of the agglutinins paralleled the duration of the quinine treatment. Researches on the influence of quinine on formation of agglutinins in man are now being carried on.

Russkaya Klinika, Moscow

6: 761-893 (Dec.) 1926. Partial Index

Relation Between Epulis and Fibrous Osteitis. A. V. Ryvkind.—p. 761.
Morphologic Blood Changes in Scurvy. L. Gurevich.—p. 777.
*Estimation of the Evacuating Activity of the Stomach. K. V. Punin.—p. 794.

Formula for Estimation of the Evacuating Activity of the Stomach.—In order to establish the emptying ability of the stomach, the amount of the gastric juice secreted between the time of intake of the test meal and that of withdrawal of the remaining food must be known. In his calculation, Punin takes for granted that the difference in the quantity of the gastric juice is considerable in various diseases, but that its acidity is almost always the same. From 0.4 to 0.5 per cent of free hydrochloric acid is found constantly in the gastric juice. The formula suggested is $\frac{Y = p \cdot a}{0.5 - d}$. Y indicates the amount of the secreted gastric juice; p, the amount of the food introduced, and a the amount of hydrochloric acid in 100 cc. of the juice. The quantity of the evacuated food is easily estimated by subtracting the amount of the food removed (d) from the food introduced (p) plus the secreted gastric juice (y). Thus $\times = (p + y) - d$. The evacuating ability of the stomach was estimated by this method in 250 cases. In twenty-eight, the diagnosis was confirmed at operation.

Acta Obstet. et Gyn. Scandinavica, Helsingfors

5: 201-461, 1926

Local Anesthesia for Prolapse Operation. N. E. Cronberg.—p. 201. In English.
*Corpus Luteum and Pregnancy. M. Erik Ask-Upmark.—p. 211.
*Prevention of Eclampsia. E. Persson.—p. 230.
Results of Neugebauer-Le Fort's Prolapse Operation. C. Börjeson.—p. 235.
Lüttge-von Mertz' Modification of Abderhalden's Reaction. A. Lennér.—p. 246.
Treatment of Nontuberculous Diseases of the Adnexa. J. P. Hartmann.—p. 254.
Idem. E. Ahlström.—p. 291.
*Suggestions for Applying Credé's Prophylaxis. C. G. Boström.—p. 355. In English.
*Importance of Antenatal Care. S. A. Gammeltoft.—p. 363. In English.
*Idem. O. Nyeborg.—p. 380. In English.
Transit of the Ovum from Ovary to Uterus in Rabbits. A. Westman. Supplement.—pp. 7-104. In English.

Corpus Luteum and Pregnancy.—Erik Ask-Upmark reviews the literature on the subject of the necessity of the presence of the corpus luteum for the maintenance of pregnancy during the first two months. He comes to the conclusion that there is abundant evidence against such a necessity in the case of the human being.

Does Treatment of the Preeclamptic Condition Prevent Eclampsia?—During the last twenty years eclampsia has been combated at the Lund university clinic by systematic treatment of the preeclamptic condition by diet, and, where necessary, venesection or interruption of pregnancy. The results, especially in recent years, are encouraging.

Application of Credé's Prophylactic Method.—Boström advises sealed drop-bottles or ampules to prevent accidents in which corrosive substances are dropped into the child's eye in place of silver nitrate. He recalls that Credé insisted on the use of a glass rod, insuring that each conjunctival sac actually received its drop. A study of forty-four cases of caustic injury to the eyes by a mistake in the solution applied indicates that by the present method of application this aim is not realized in a large number of cases. To obviate this in the case of the drop-bottle, he has had the tip of the glass stopper reshaped into a 3 mm. thick, smooth, rounded rod.

Importance of Antenatal Care.—There were 121 maternal deaths in a total of 14,633 confinements at the Rigs hospital (university clinic), Copenhagen, from 1917 to 1925. In thirty-nine of these cases, antenatal treatment would probably, Gammeltoft says, have prevented the fatal outcome. The various causes of death are tabulated, and in regard to each group the question is discussed as to whether or not treatment at an earlier stage of pregnancy might have saved life. A brief history of antenatal care in Denmark is given by Nyeborg. He goes on to show the results obtained by the Copenhagen university clinic (departments for diseases during pregnancy and for antenatal care) in pelvic anomalies, hyperemesis, morbus cordis, pulmonary tuberculosis and syphilis. These complications were present in 23 per cent of 3,000 pregnancies, and the results obtained by antenatal care thoroughly confirmed its value.